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TETANUS IN THE UNITED STATES FOLLOWING THE USE OF BUNION PADS AS A VACCINATION DRESSING

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Through investigations of the complications following vaccination against smallpox, 11 cases of postvaccinal tetanus which followed the use of bunion pads as a vaccination dressing have been investigated. Nine of these cases were fatal. The cases occurred in seven States and were distributed in point of time as follows: Two in 1921, 5 in 1924, and 4 in 1925 (to May 20).¹

The extent to which bunion pads, which consist of a felt ring coated on one side with a film of glue, are used as a vaccination dressing in the United States is unknown. It is, however, apparent from these studies that in certain localities their use for this purpose is not uncommon.

Six of the physicians in whose practice 7 of the 10 cases of postvaccinal tetanus developed, estimate that they had vaccinated approximately 700 persons on whom bunion pads were applied as a dressing. These cases were vaccinated during the fall of 1924 and the winter of 1924-25, during the same period in which the cases of tetanus developed.

Bunion pads of the same varieties and from the same sources as those used in the cases which developed tetanus were collected from several localities. These samples were examined by Dr. Ida A. Bengtson. In addition, 186 pads of similar makes, purchased in Washington, D. C., were examined by Mr. Conrad H. Kinyoun.

Approximately 25 per cent of these pads showed the presence of tetanus organisms. The criterion of infection of the pads was the development, on glucose broth or meat mash media, of an organism morphologically like tetanus, which developed a toxin lethal for mice and neutralizable with tetanus antitoxin.

¹ Wm. Findlay and J. W. Findlay (1902-Lancet I, pp. 506-510) report a case of tetanus, female, age 21, which occurred in Glasgow in 1901, following the use of a bunion pad on a leg vaccination. This is described as a revaccination. Scarification method was employed, insertion "a little over half a square inch in size." Symptoms of tetanus developed on the twelfth day following vaccination; bunion pad still in place. Pad was removed on thirteenth day; wound did not look "particularly healthy." The case recovered. No causative relationship was suspected between the dressing and the development of tetanus in this case.

If the 700 pads known to have been used in the practice of these six physicians were contaminated with tetanus in the same proportion as those which we tested, it would mean that 175 persons were dressed with infected bunion pads and only 7, or 4 per cent, developed tetanus.

In nine of the cases investigated, the tetanus followed a primary vaccination, while in two cases the data on this point are not available. We have not yet, as far as is known, met a case of postvaccinal tetanus following any save a primary vaccination. This suggests that the development of tetanus is dependent upon a severe local "take," which, in turn, depends upon the susceptibility of the patient and, to some extent, upon the method of vaccination.

It may, therefore, be significant that these cases all followed the cross-hatch or scarification methods of insertion, methods which undoubtedly tend to give more severe local lesions in primary vaccinations than are caused by the multiple puncture method; that is, 20 to 30 tangential punctures in an area one-eighth inch square, or a single linear insertion one-eighth inch in length.

The abrasion described in these 10 cases varied in size from 3 millimeters in diameter to the size of a dime.

The virus used in these cases was from three different manufacturers, A, B, and C.

A's product was used in two cases, B's in five cases, and C's in three cases (and probably in a fourth). In only one instance was it possible to establish definitely the exact lot of virus used. Bulk samples of this lot were carefully retested by different workers, using various methods, but no tetanus could be demonstrated. In other instances in which the exact lot number of the virus could not be definitely determined, it was possible to determine that the virus must necessarily have been from one of several lots. In such cases samples of all these lots were carefully retested, but tetanus was not demonstrated in any of them. Moreover, among some 25,000 vaccinations, methods unknown, which were estimated to have been performed in 1924 and 1925, during the same period and in the same localities in which seven cases of tetanus followed the use of bunion pads as a dressing, not a single definite case of tetanus developed. In one locality, after cases 7 and 8 had died, a child with a severe leg vaccination was given antitoxin on account of pain and stiffness in the neck. Subsequent course and prompt recovery of this case indicate that the ailment was probably not tetanus.

A summary of the 11 cases of tetanus is shown in Table 1, and a more detailed vaccination history of each case follows.

TABLE 1

Case No.	Color	Sex	Age	Vaccinated	Vaccination history	Bunion pad applied—	Interval, vaccination to onset of tetanus, in days	Termination
1	White.....	Male.....	6	1921	Primary...	At time of vaccination.....	12	Fatal.
2	do.....	do.....	6	1921	do.....	do.....	(?)	Do.
3	do.....	do.....	16	1924	do.....	do.....	28	Do.
4	do.....	do.....	(1)	1924	(?)	do.....	15	Do.
5	do.....	Female.....	9	1924	Primary...	Fourth day after vaccinated.....	16	Recovered.
2	do.....	do.....	(?)	1924	(?)	do.....	(?)	Fatal.
7	do.....	Male.....	6	1924	Primary...	At time of vaccination.....	23	Recovered.
8	do.....	Female.....	30	1925	do.....	do.....	20	Fatal.
9	do.....	Male.....	16	1925	do.....	do.....	24	Do.
10	do.....	Female.....	8	1925	do.....	do.....	20	Do.
11	do.....	do.....	7	1925	do.....	do.....	19	Do.

¹ Adult.

² Child.

Case 1.—White, male, age 6, home conditions unknown. Vaccinated January 21, 1921, left arm, usual site. Arm cleaned with alcohol, followed by water. Scarification method of vaccination was employed, virus B was rubbed in, and an oval bunion pad was applied. Pad was covered with gauze held in place by adhesive strips. Patient was advised to remove pad in one week, clean lesion with boric acid, and apply a gauze dressing. Tetanus developed February 2, 1921; trismus and opisthotonos present. Child transferred to hospital, received 4,500 units antitoxin February 3. Died February 5, 1921.

Case 2.—White, male, age 6, one of a family of seven, home surroundings poor, no livestock except few chickens. Child was well when vaccinated; primary vaccination September, 1921; usual site, right arm. Insertion was made by abrading an area "size of a dime." Virus from manufacturer B rubbed in. Bunion pad applied held by two strips of adhesive. Arm became foul smelling and pad was removed "9 or 10 days later." Lesion at this time described by mother as size of 50-cent piece. Bandage was applied by parent. Tetanus developed later and child died September 21. No history of injury in case.

Case 3.—White, male, age 16, school boy, only child, home surroundings excellent, no livestock or pets of any kind. Boy was well when vaccinated August 26, 1924. Arm was cleaned with soap and water and alcohol. Insertion, primary, on left arm, usual site. Area described as 3/16 by 3/16 inch, abraded with needle. Virus of manufacturer B was rubbed in. Bunion pad was applied, the opening of which was covered by a celluloid top, fitted by the physician.

Shield was on for 21 days when it came off. The arm was foul smelling at this time and there was a large hole the size of 25 or even 50 cent piece. Symptoms of tetanus developed September 21; ran a typical severe course; 5,000 units antitoxin were given intramuscularly on 22d. Death occurred September 23. No history of injuries other than vaccination.

Case 4.—White, male, adult, automobile mechanic, vaccinated October 27, 1924 (primary (?)) crosshatch method, virus C was rubbed in, and a bunion pad was applied, held by strips of adhesive above and below. The take discharged profusely, but "wasn't sore," so patient refused to return to physician. He next saw his physician November 11 and complained of rigidity of muscles of jaws and neck. Diagnosis of tetanus was made the same day; 20,000 units antitoxin were administered intravenously on 12th and 500 units locally about the site of vaccination. Chloral and morphine were given freely, and 80 c. c. of 3 per cent magnesium sulphate were given intravenously. On November 13 the patient received 5,000 units antitoxin intrathecally; died same day in general convulsions. No history of other injuries.

Case 5.—White, female, age 9, home surroundings "not the best," vaccinated at school along with 60 other children on November 20, 1924, on left arm. Scarification method; abrasion stated to cover about 5 square millimeters. Virus A was rubbed in and allowed to dry for 10 minutes; no dressing. After four days a bunion pad was applied, felt-side down, held by two strips of adhesive and covered by three or four turns of a 2-inch bandage. The first symptoms of tetanus were noted on December 6, but the child was not seen by physician until December 9, at which time there was a fully developed case of tetanus. Child was conscious, temperature was normal, pulse 90, full and strong. Tonic spasms occurred at half minute intervals, jaws rigid, opisthotonos present. Vaccination described as about healed, but covered with a black scab, which was removed. Chloral and potassium bromide by mouth and 1 c. c. of 2 per cent carbolic acid solution hypodermically were given every 3 hours. This treatment seemed to hold spasms in check and child remained about the same for two weeks. Attempts to cut down the dosage of chloral and, in one instance, to reduce the carbolic acid were followed by return of contractures. Improvement then began, and on December 23 patient could open her mouth and partially flex both legs. Medication was then reduced with no return of symptoms. Recovery was complete. No history of other injuries.

Case 6.—White, child, age unknown, was vaccinated at the same school on same day, by means of the same method, and by same physician as case 4. The child moved to another State, where she died of tetanus. Further particulars not available.

Case 7.—White, male, age 6, home conditions excellent. Received primary vaccination on the arm on December 13, 1924. A scarification described as about 3 millimeters in diameter was made and virus from manufacturer B was rubbed in. A bunion pad was applied, covered with gauze and a bandage. This dressing remained undisturbed for 10 days; it was then removed by physician and another was applied. At this time vaccination area filled pad, had ruptured, and was surrounded with multiple vesicles. Site was indurated and arm markedly swollen to the elbow, very painful. Following this the arm was dressed every third day by a nurse and began to heal. On January 5 the boy complained of a stiff back, which increased, and on January 8 he complained of sore throat and stiff jaws. He was moved to a hospital on January 11 with a well developed case of tetanus, jaws set, body rigid, and repeated convulsions. He received 11,500 units of antitoxin with morphine to control the spasms. He was kept in a narcotic sleep. On the 15th he received 7,000 units of antitoxin. On the following day convalescence apparently was beginning. Recovered. No history of other lesions.

Case 8.—White, female, age 39, housewife, lived in country, surroundings unknown. Kept two cows and some chickens. Primary vaccination January 11, 1925. Arm was cleaned with soap and alcohol, area "size of pea" was abraded with needle, virus C was rubbed in and left to dry for 30 minutes, and bunion pad was applied, held by adhesive above and below. Pad was undisturbed for 10 days, at the end of which time it was removed on account of the odor. Patient cleaned the arm and applied a celluloid shield. Wound was described as size of a 5 cent to 25 cent piece. A scab was present and pus ran from beneath it. Typical symptoms of tetanus developed on January 31. The patient died on February 2. The husband states that a solid scab was present and that the lesion was healing at time of death. The patient was just convalescing from scarlet fever when vaccinated. There was no history of any lesion other than vaccination.

Case 9.—White, male, age 16, farm hand, surroundings fair. Received primary vaccination on January 13, 1925, usual site, left arm. Arm was cleaned with soap and water, possibly followed by ether. Insertion was made by 10 parallel scratches with a needle, covering an area $\frac{3}{16}$ by $\frac{3}{16}$ inch. Virus C was rubbed in and allowed to dry for 15 to 30 minutes. A bunion pad was then applied and held in place by three diagonal strips of adhesive, which closed the opening of the pad. Dressing was undisturbed for 14 days. Pad was then removed. Arm was swollen and smelled bad; scab was loose and came away, leaving an area size of 5 to 25 cent piece and from $\frac{1}{16}$ to $\frac{1}{2}$ inch in depth. Gauze dressing was applied. On February 3 patient was seen by physician and wound said to be

healing. February 6, the patient felt stiff and complained of throat and back being sore. February 9 stiffness increased and mouth could not be opened. Temperature, 99°. February 10 all symptoms increased, jaws set, risus and opisthotonos present, neck rigid. Antitoxin, 10,000 units, given subcutaneously. Later, generalized convulsions supervened. Death occurred on February 12, 1925. No history of other lesions.

Case 10.—White, female, age 8, schoolgirl, home conditions good; no animals on premises. Well when vaccinated. Primary vaccination on thigh half way between knee and hip on January 25, 1925. The area was cleaned with water, and an area $\frac{3}{8}$ by $\frac{3}{8}$ inch abraded. Virus B was applied. A bunion pad, glue-side down, was placed over the wound. This was covered with gauze held in place by adhesive. About "one week" later the pad was removed and the scab came with it, leaving a wound described as about the size of a 25-cent piece, not very deep, and with little redness or swelling. The child was first seen by the physician on February 15, complaining of sore neck and inability to open jaws. A diagnosis of tetanus was made. The symptoms developed rapidly—general rigidity, convulsions, etc. Death resulted on February 18. No history of any lesion other than vaccination. A twin brother was vaccinated at the same time by the same method and the vaccination progressed normally.

Case 11.—White, female, age 9, schoolgirl, home conditions poor. Child received primary vaccination on February 2. The arm was cleaned with 1:5000 bichloride, and alcohol was applied. Area about $\frac{3}{8}$ by $\frac{3}{8}$ inch was crosshatched with the needle and the virus, probably C's, was rubbed in. A bunion pad was then applied, glue-side up, and held in place by a broad strip of adhesive which completely closed the opening of the pad. Dressing was undisturbed for eight days, when it was removed by the physician and a gauze dressing applied. The child developed typical symptoms of tetanus on February 21 and died on February 23, 1925. Antitoxin was used. No history of any other abrasions.

SUMMARY

1. Eleven cases of postvaccination tetanus are reported following the use of bunion pads as a vaccination dressing.
2. Tetanus organisms were demonstrated in approximately 25 per cent of 200 pads of the same makes as those used on cases developing tetanus.
3. The 11 cases in which tetanus developed were all vaccinated by the scarification method; in 9 the vaccination was primary, while in 2 the vaccination history is unknown.

CONCLUSION

The facts revealed by this investigation (paragraphs 1 and 2) clearly indicate that the use of bunion pads as vaccination dressings should be strongly advised against.

STUDIES OF IMPOUNDED WATERS IN RELATION TO MALARIA

By E. H. GAGE, Associate Sanitary Engineer, United States Public Health Service

Standing water in ponds and swamps has long been associated with malaria. Many years before mankind knew what malaria was, or how transmitted, it had been observed that it was unhealthy to live in too close proximity to stagnant pools and swampy areas in temperate and tropical regions of the globe. It is only during the present generation that the connection between such bodies of water and the malarial fevers has been scientifically explained. This connection has been shown to involve (1) anopheline mosquitoes, which pass the first stages of life in such waters; (2) human beings in the vicinity, on whom the mosquitoes feed; and (3) the malarial plasmodium, which is imbibed by the mosquito while feeding, undergoes reproduction in her body, and then renders her capable of infecting with malaria many other human beings.

Soon after the facts concerning malaria transmission were established, the United States Public Health Service began the study of impounded waters in their relation to malaria transmission in the United States. These studies were first undertaken in 1914 and have been continued since that time, except for certain unavoidable interruptions such as that occasioned by the World War. The object of these studies has been to determine the importance of impounded waters in the transmission of malaria in potentially malarious regions of the United States and to discover what measures should be adopted in impounding and maintaining bodies of water in these regions to render them of least danger to the public health. Great progress has been made in both of these directions during the past 10 years. Bulletins have been issued by the Public Health Service from time to time dealing with the main problems of impounded waters, and regulations governing the impounding of waters have been outlined by service officers and adopted by practically all of the States which have to contend with this phase of the malaria problem.

It has been found that many factors must be considered in determining the potential danger of an impounded water project from a malaria standpoint. Size alone is certainly not the most important factor; the largest impounded water projects are frequently the least dangerous. Usually in the Southern States, the large bodies of

water are impounded for power purposes, the reservoirs being located in mountainous regions, with sparse settlements along their borders, and frequently do not produce anopheline mosquitoes in great abundance. Hence it can be seen that a small pond impounded on the outskirts of a village as a recreation pond, water supply, or stock pond, may prove to be a greater malaria menace than the much larger body of water many miles away in the mountains.

In the following report of studies which were conducted in the piedmont region of North Carolina during 1923, different types of ponds are included and an attempt is made to present a clear picture of the possibilities of malaria transmission in each case and to point out the precautions taken or which should have been taken in order to minimize this danger.

Water Supply Reservoir, Albemarle, N. C.

PHYSICAL CONDITIONS

Albemarle, the county seat of Stanly County, N. C., is located on the divide between the watersheds of the Yadkin and the Rocky Rivers, at an elevation of 700 feet above sea level. The water supply for the town is derived from Long Creek, a tributary of Rocky River. A dam across the creek at a point about 2 miles west of the center of town creates a storage reservoir of 105 acres. The water in the pond is normally clear. It is aerated, coagulated and settled, filtered, and chlorinated before delivery to the distribution system.

The surrounding topography is hilly, and the soil a silty, clay loam, is subject to considerable erosion. Much of the closer watershed is cleared and has recently been cultivated. Small wooded areas near by consist chiefly of second-growth pine and oak. The entering streams are little more than wet-weather drains, with the exception of Long Creek itself, which, above backwater, has a good flow through a rocky channel.

Normal precipitation in this locality is close to 48 inches a year. June, July, and August are the wet months, with a rainfall of about 5 inches in each, while September, October, and November normally have a rainfall of about 3 inches each. In 1923 there was an abnormal precipitation in March, with less than normal from June through October.

Monthly mean normal temperature at Albemarle reaches a maximum of 78.4° in July and is above 70° from about May 20 through September 20. Actual monthly means for 1923 were close to the normal. The average date of the last killing frost in the spring is April 12, and the first in the fall, October 23; but in 1923 the last temperature of 32° occurred on May 10, and the first in the fall on October 25. Average water temperatures at the surface of the

reservoir were found to exceed the mean actual air temperatures from July through October.

The immediate vicinity of the reservoir is sparsely populated, but the western border of the town of Albemarle is not over three-quarters of a mile from the dam. Many new homes are being built in this part of the town.

HISTORY OF RESERVOIR

The dam was completed on March 10, 1923, and water first ran over the spillway on July 30, 1923. There was not, however, a continuous gradual rise in water level during the interval between these dates. The creek channel above the dam is rather deep, and the water rose almost to the top of the channel banks, at which point it remained until the middle of July. At that time a series of heavy showers on the watershed caused a rapid rise to full reservoir.

The area flooded was incompletely cleared. The main body of the reservoir immediately above the dam was rather well cleared. Farther upstream, near the State highway crossing (Fig. 1), clearing was incomplete to the extent that trees and bushes were left standing, and still farther upstream the heavily overgrown banks of the creek channel and near-by bottom lands were entirely uncleared. Such clearing as was done was finished early in the spring of 1923, with the result that a rank growth of grass and weeds had come up before the water covered the area.

As previously stated, the reservoir has an area of 105 acres with the water standing at the crest of the spillway. There are large areas of shallow overflow, particularly on the right bank near the dam and on both banks above and below the State highway crossing. As an indication of the topography of these areas, it may be stated that the area of the water surface decreases from 105 acres to 24 acres in a 10-foot fall in level below the crest of the spillway. Field observations, without instruments, would indicate that approximately one-half of this 77 per cent decrease in water surface occurs in the first 2 feet of fall in water level. The shore line, except around these areas of shallow overflow, is fairly steep, but rarely could it be called abrupt.

HISTORY OF MALARIA

Malaria has existed in this vicinity in past years, scattered cases having been reported by the county health officer and local physicians. Some years ago there was a considerable amount of malaria in the town of Albemarle, according to popular report. More recently it has not been prevalent, a fact which is locally attributed to the straightening of Town Creek. During the summer of 1923 the county health officer reported slightly more malaria in

the county than usual, but none in the vicinity of the reservoir until late October, at which time its presence in three families near the reservoir was reported. Other physicians than the one attending these families reported no noticeable increase.

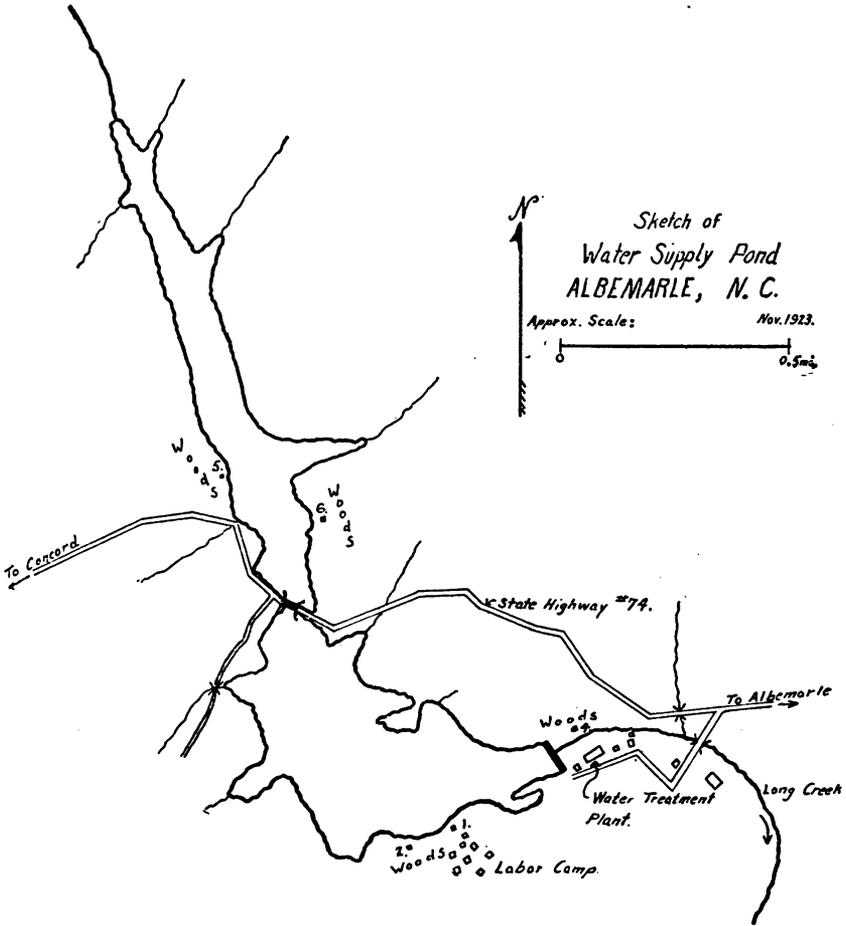


FIG. 1

FIELD OBSERVATIONS

The reservoir was first visited on July 19, 1923, and frequently thereafter until October 15, with a later visit on November 8. On July 19 the water level was within 1 foot of the crest of the spillway—the heavy showers which caused the rapid filling of the reservoir had occurred during the week immediately preceding. At that time the construction of the water-treatment plant was incomplete. About 30 negroes—the construction gang and families—were housed in shacks within 150 feet of the reservoir and above the dam. Foremen occupied shacks just below the dam. Both foremen and

laborers were imported and had been on work near Wilmington, N. C., during 1922, at which time there were stated to have been some cases of malaria in the gang. Sickness in the negro camp, diagnosed as typhoid, had caused one death on July 14. No report of malaria among the gang was obtained from attending physicians, although several of the laborers reported chills and complained of a serious mosquito nuisance. The labor camp was left vacant in mid-August. Adult *Anopheles quadrimaculatus* were found in the shacks on August 7 and continuously thereafter until September 17, after which date the shacks were removed. The operator at the water plant is housed about 1,000 feet below the dam. He reported two cases of malaria in his family during 1922. Gorged *A. quadrimaculatus* were found in his house on August 7, but certain changes and additions to the screening were immediately made and no specimens were found on later searches, although they were present in a near-by stable at each examination through October 9. The first *A. quadrimaculatus* emerged from a collection of larvæ made in the reservoir on August 14.

Larvæ of *Anopheles* and non-*Anopheles* were found along the edges of the reservoir at all times prior to November 8. The fact that the water level had been lowered about 2 feet early in November, uncovering the large areas of shallow overflow and exposing a reasonably clear shore line with little protection for larvæ should be considered, perhaps, the determining factor in the absence of larvæ on November 8.

At the time of the first visit, July 19, larvæ were not plentiful. The reservoir had filled during the previous week. The numbers of larvæ found rapidly increased, and from August 1 through October 9 they were present in abundance. There was a noticeable reduction in the number of larvæ on October 15. Throughout the period from July 19 to October 15, larvæ were found to be concentrated in spots, the spots of greatest prevalence remaining practically constant. It does not appear likely that there was any great difference in the vegetation or protection offered, since spots of great and slight larval prevalence were adjacent. Along the steeper banks, where the vegetation was more wiry in structure, the fewest larvæ were found, in general; whereas along the flat banks, where the vegetation formed a mat on the water surface, the greatest numbers of larvæ were found. No *Gambusia affinis* or other surface-feeding minnows were observed in the reservoir.

Full-grown larvæ and pupæ taken by dipping were saved for emergence; and of 211 emergences from collections made on 13 occasions in various parts of the reservoir, 20 per cent were *A. quadrimaculatus* and 80 per cent *A. punctipennis*. The first *A. quadrimaculatus* emerged from a collection made on August 14; the last from one

made on September 25. Outside the reservoir, in pockets of entering streams, in construction pools below the dam, and in pools of the stream bed below the dam considerable numbers of *Anopheles* larvæ were found. Emergences from collections made in such places were *A. punctipennis*, without exception. No other species of *Anopheles* emerged from any collection made in or outside of the reservoir.

Adult *Anopheles* were found in various resting places around the reservoir at each visit throughout the period from July 19 to October 15. *A. punctipennis* were always present, while the first *A. quadrimaculatus* was found on August 7 and the last on October 15. Late in August four boxes and a keg were located near the edge of the reservoir to serve as collection points for adult mosquitoes. Counts were made at each of these points on eight occasions between September 1 and November 8, with the following results:

Species	Males	Females	Total	Per cent
<i>A. quadrimaculatus</i>	20	14	34	24
<i>A. punctipennis</i>	54	56	110	76
Total.....	74	70	144	-----
Per cent.....	51	49	-----	100

The percentages, by species, of adults caught in the immediate vicinity of the reservoir and of emergences from collections of larvæ and pupæ from the reservoir are shown in the following table:

	Total number	Per cent <i>A. punct.</i>	Per cent <i>A. quad.</i>
Adults caught.....	259	57	43
Emergences.....	211	80	20

No efforts directed primarily at the control of mosquito production were undertaken during the 1923 season. The level of the water in the reservoir was lowered 6 or 8 inches at various times and copper sulphate was applied at least once in attempting to get rid of tastes and odors which had developed in the water soon after the reservoir had been filled. These efforts produced no noticeable reduction in the number of larvæ present. The low water level was rarely maintained for a period longer than 24 hours, and thus did not give the uncovered shore line a chance to become thoroughly dry. Early in November the level was reduced about 2 feet preparatory to completing the clearing of the flooded area. This was not undertaken earlier, since a shortage of water during the dry season was feared.

COMMENTS

The situation at Albemarle is not unusual and is thought to present an excellent example of the intimate relation which may exist between different phases of public health work. That improvements in the water supply were badly needed was recognized by the entire community; yet there was some disagreement over the method best suited to obtain these improvements. Albemarle is in the piedmont section, at an elevation of about 700 feet above sea level; and while malaria is present, it is not particularly prevalent. It is, however, quite possible that, given an area suitable for the production of anopheline mosquitoes, an outbreak of malaria might occur. The impounding of a stream for water supply might create an excellent production area for anopheline mosquitoes.

Certain procedures tending to reduce the production of mosquitoes from impounded waters have been outlined by the United States Public Health Service. These procedures should be followed in all instances. They may be summarized briefly as follows:

- (1) Clean banks.
 - (a) Fluctuation of water level.
 - (b) Removal of flottage.
- (2) No aquatic vegetation reaching the surface of the water.
- (3) A minimum area of shallow overflow at summer water level.
- (4) Care of imported labor.
- (5) Impounding of the water during the winter months.
- (6) Introduction of *Gambusia affinis*.
- (7) Occasional observation of the pond and its immediate vicinity.

These procedures are necessarily general, and the particular methods best suited to any one project can be determined only by a field survey. In the case of a water supply, the primary data of such a survey could well be collected at the time of the original sanitary survey of the watershed.

Hydroelectric Development, Badin, N. C.

PHYSICAL CONDITIONS

The Badin Pond (Fig. 2) is located on the Yadkin River, principally in Montgomery and Stanly Counties, N. C., with the extreme upper end of the eastern arm extending into Davidson County. The pond is formed by a concrete dam about 200 feet in height, located at a point known as The Narrows and at an elevation of approximately 550 feet above sea level. When the water level stands 1 foot below the top of the spillway gates, the flooded area is 5,570 acres. The project is operated for the production of electric power, part of which is used locally in the reduction of aluminum ore.

The topography in the region is hilly to rough, generally wooded in second-growth pine and oak. The soil is silt loam and slate loam, with numerous rock outcrops, and a clay subsoil. There is considerable erosion, and the water in the pond is highly turbid at all times. Farms are small and scattered. Wheat and corn are

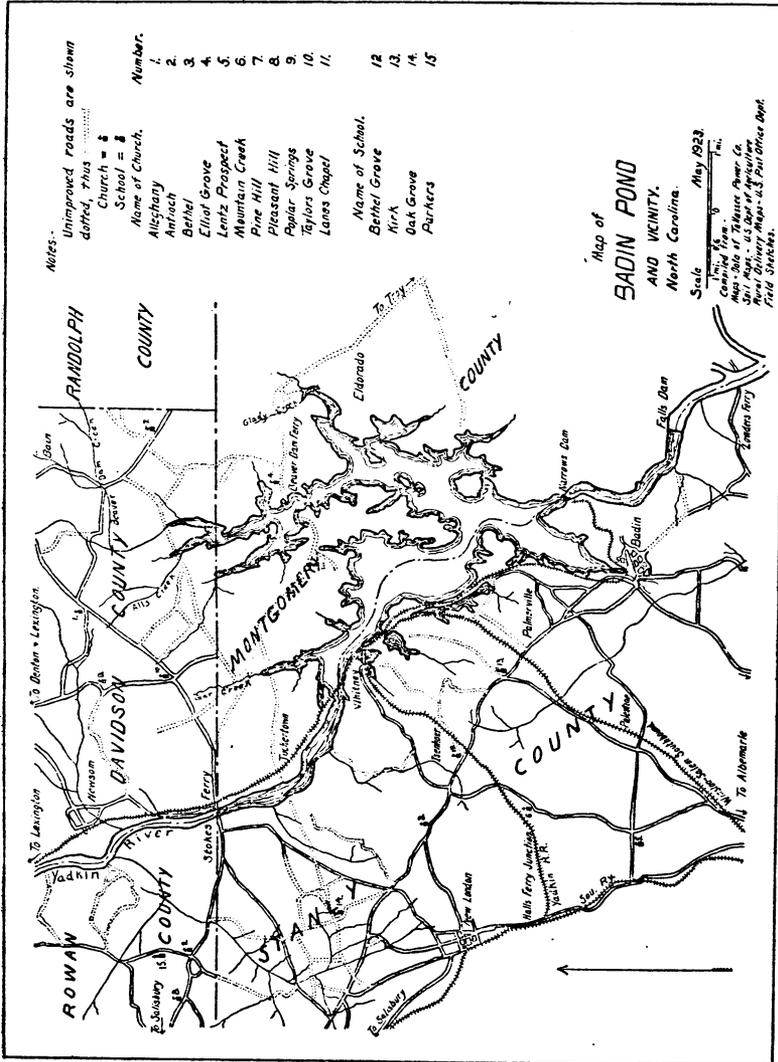


FIG. 2

the chief crops grown. The majority of the entering streams are small and either completely dry or consist only of puddles in dry weather. Four larger streams should be mentioned: Gar Creek, Alls Creek, Beaver Dam Creek, and Gladys Creek. These have good fall, sandy to rocky channels, and fair flow even in very dry weather.

Annual normal precipitation on the watershed¹ is 48.96 inches, with a definite peak (5.63 inches) in July. This peak gives rise to what are known as the July floods, which may be expected to maintain a full pond through that month. Precipitation in 1923 reached an abnormal peak (7.29 inches) in March, and was below normal from June through October.

Temperatures reported for Albemarle may be applied at this pond. Albemarle is the nearest observation station, and is 6 miles southwest of Badin.

The groups of population in the vicinity of the pond are very scattered. Badin, population about 3,000 is located at the extreme southern end; Palmerville, population about 50, is located on the west side of the pond 2 miles north of Badin; Whitney, population about 20, also on the west side, 6 miles north of Badin; and Tuckertown, a mill village, population about 200, is located on the east bank of the river at the head of backwater. In the vicinity of Beaver Dam ferry and north of this point is a small farming community containing about 75 people. Other than these there are very few people within a mile of the pond.

HISTORY OF PROJECT

The dam was completed and the water impounded during the summer of 1917. There was a large amount of clearing done in the area before the dam was closed. The southern end of the area and the bights along the river were completely cleared of trees and brush. The Beaver Dam section, that forming the eastern arm of the "Y," was not cleared or was only partially cleared. In this uncleared portion the trees have been killed by the water and present a very unsightly tangle. The psychological effect of this condition is believed to have been unfavorable in the extreme. As the trees died, the bark slipped off and the smaller limbs dropped; and recently many tree trunks have fallen. Some of the débris has been washed ashore and stranded; more of it has been held off by standing timber until it has become waterlogged and has sunk. Bark and small twigs sunk in this manner become sufficiently dry when exposed during periods of low water to float again on a rising pond. The result is that, at full pond, and with a rising pond, the water line in this section is heavily coated with flottage and presents a condition which appears to be favorable for mosquito larvæ. The upper ends of many of the well-cleared bights at the southern end of the pond and along the river contain large piles of drift. The greater part of this drift is brought down the river in floods and blown into the bights by the prevailing southwest wind.

¹ Average of 7 stations: Salisbury, Statesville, Settle, Winston-Salem, Elkins, Brewers, and Mount Airy.

The area of shallow overflow is not large. West of the railroad at Whitney, and near Tuckertown, are the two largest of these areas, and at the upper ends of the forks at the north end of the pond are small areas with less than 2 feet of water cover at full pond. The greater part of the shore line is steep and in some instances abrupt. As an indication of the type of shore line, it may be stated that in the first 10 feet of fall in water level below full pond there is a reduction of 763 acres, or 14 per cent, in the flooded area.

HISTORY OF MALARIA

Malaria has existed in the region for many years, particularly along the river. This is stated by practically all residents and local physicians. Statements as to the extent of the disease vary considerably, but the general impression gained is that it was not at all uncommon. More recently, and particularly since the pond was filled, there has been much complaint of malaria in the vicinity of the north end of the pond. The chief cause of this complaint appears to be that the disease is now present among people living on the higher land. In this connection it is well to remember two changes that have been brought about by the pond: (1) Those of the original bottom-land families who have not left the region now live on the higher land; (2) the flooding of the bottom land has driven the farming operations onto the less fertile, more readily scoured, hillsides. No attempt was made to take a malaria history census of the region, as it appeared early in the season that the information so obtained would not be reliable. Malaria and the pond have come to be synonymous in the minds of a majority of the residents here. There is no complaint of malaria at Badin or at Palmerville.

FIELD OBSERVATIONS

The pond was first visited on April 5, 1923, and frequently thereafter through October 16, 1923. During the first half of April there were found in the flottage in small bights west of the railroad near Badin considerable numbers of small and half-grown larvæ, both *Anopheles* and non-*Anopheles*; and in pond bights near Beaver Dam Ferry, full-grown larvæ and pupæ of *Anopheles* were plentiful. After the middle of April, small *Anopheles* larvæ, as well as full-grown larvæ and pupæ, were found in pond bights, but in diminishing numbers until the first of June. From then on, larvæ in the pond were rare. Adults caught and emergences from collections of larvæ and pupæ made in the pond during the month of April were exclusively *A. punctipennis*. During May and early June, a few pupæ from which *A. crucians* emerged were collected from widely separated parts of the pond. The first of these emerged from a



Collection of drift at upper end of a river bight, Badin Pond



Uncleared section north of beaver dam ferry, Badin Pond

collection made on May 9. No specimens of *A. quadrimaculatus* emerged from pond collections until September 4. Adults of *A. punctipennis* were readily found near the pond in April and early May, after which time but few were found. The first adult found was a male, resting just above a spring, on April 5.

The percentage, by species, of adults caught in the immediate vicinity of the pond, and of emergences from larvæ and pupæ collected from the pond, are shown in the following table:

	Total number	Per cent <i>A. punct.</i>	Per cent <i>A. quad.</i>	Per cent <i>A. cruc.</i>
Adults caught.....	68	82	12	6
Emergences.....	131	90	3	7

Aquatic plants around the shore line of the pond are rare. There is a small area of cat-tail growth and some willow near Tuckertown. The alga *Anabæna*,¹ a hairlike growth not clinging together but completely covering the water surface at the heads of some bights, appeared late in July and persisted until the middle of September, after which time but few small patches were seen. This growth did not inhibit the development of larvæ in the laboratory, although no larvæ were found in it in the pond. Other alga of the clinging type, *Spirogyra*, appeared early in September in small amounts. This alga was most frequently found binding together small collections of bark or twigs, and often sheltered larvæ. It was from such an alga-bound flotage patch that the first *A. quadrimaculatus* larvæ was taken from the pond, September 4.

Gambusia from a local hatchery have been placed in the pond in large numbers. Up to the first of July only a few of these fish were seen. After this time the numbers rapidly increased, and by the last of the month they were found in great numbers, particularly near the upper ends of the bights.

Outside the pond, in various springs, spring branches, stream pools with grassy edges, stream channels above backwater and below high-water line, and in the *Gambusia* hatchery (which was badly grown up in grass and weeds), larvæ of *Anopheles* and non-*Anopheles* were found throughout the season. Emergences from collections made in these places were exclusively *A. punctipennis* (with the exception of the hatchery, from which *A. crucians* and *A. quadrimaculatus* were also obtained, and adults of these species were found resting under a vacant house near by). In fact, the first specimen of *A. quadrimaculatus* found in the region was caught under this house on August 6, and one emerged from a collection of larvæ made at

¹ Identified by Special Expert W. C. Purdy, United States Public Health Service.

the hatchery on the same day. (It is of interest to note that the first specimens of this species were found near the Albemarle water supply reservoir, 6 miles southwest of Badin, on August 7.)

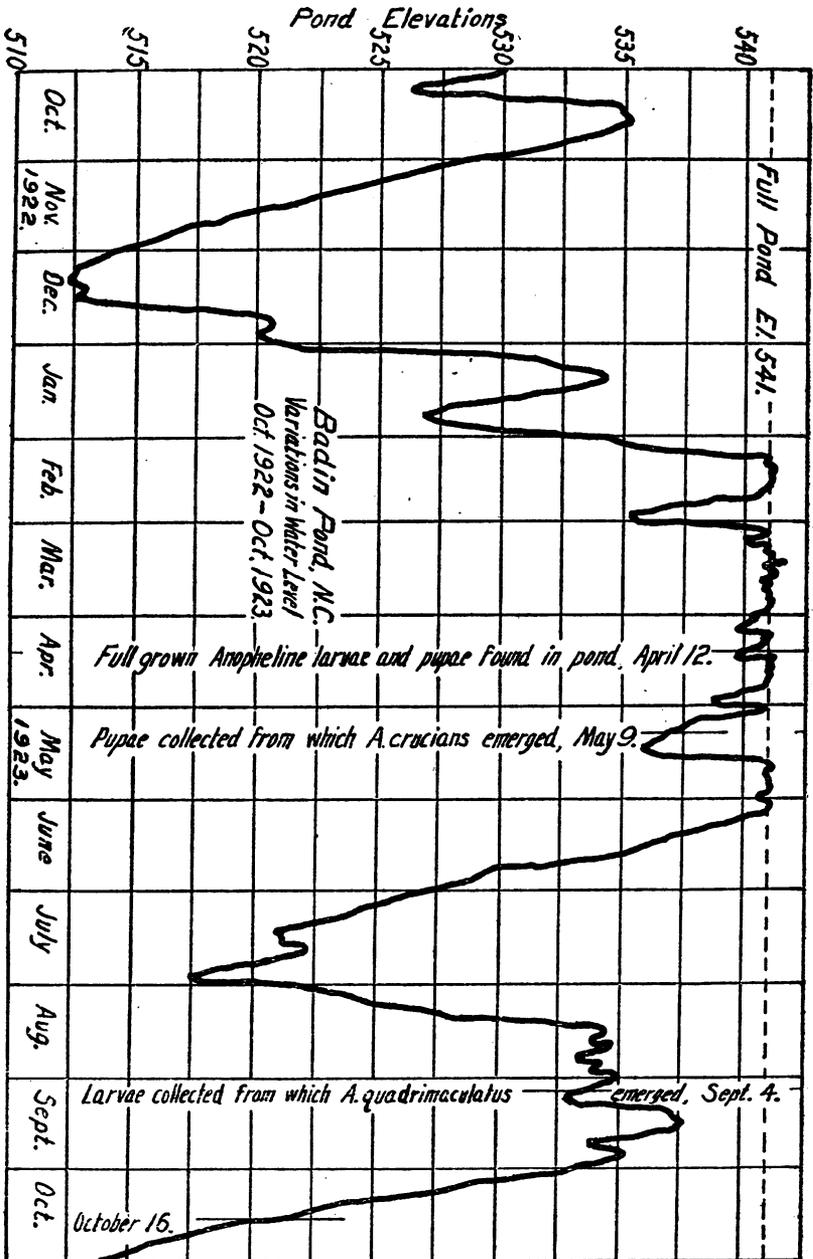


FIG. 8

From the conditions as observed and from inspection of the recorded variations in water level from 1917 through 1923, it appears that the governing factor in the presence or absence of mosquito larvæ in this

pond is the variation of the water level. In Figure 3 are shown the variations in water level from October, 1922, through October, 1923. The shore line near full pond is very trashy and strewn with bark and small twigs. When this is floated, protection for larvæ exists; and when full pond is maintained for a sufficient length of time during the mosquito-production season, larvæ may be expected. During 1923 the pond started to fall in early June (Fig. 3), stranded the drift and flottage, and presented a clear shore line. The July floods did not materialize, and it was August before the pond started to rise. During the period of low water much of the formerly water-logged bark and fine material had become thoroughly dried out. When the rising water reached this, a large amount of it floated. It was in collections of this sort that a few *Anopheles* larvæ were found in September and early October, from which emerged the only specimens of *A. quadrimaculatus* from pond collections. This refloated material was stranded in October as the pond fell, and no larvæ were found in the pond on the 16th of that month. There was little protection for them at that stage of the water. During the period of low water a large amount of clearing and burning of drift was done near high-water line.

COMMENTS

Here is a large pond which, in its seventh year, did not produce anopheline mosquitoes in sufficient numbers to be of any sanitary importance. It has been accused of causing an increase in the prevalence of malaria. Damage suits have been filed on this basis. The very fact that such suits are pending has influenced the attitude of the residents toward the pond.

The creation of this pond has changed the entire existence of a rural section. About 9 square miles of the most fertile land have been permanently flooded. Farmers owning and living on high ground and leasing bottom land to farm found themselves with only poor land from which to gain a living. Some homes were submerged and others were surrounded by the water. Churches and cemeteries were moved; roads were relocated or abandoned; and in one instance travel to the county seat was made possible by the installation of a ferry. A large industrial plant and its community have replaced farm and wood land.

An enormous amount of clearing was necessary in the area to be flooded. As is often the case, this work was started just above the dam and near the industrial plant at the southern end of the area, and was well done there. It was not completed at the head of backwater in the northeastern end of the area, a fact which caused considerable discontent among the inhabitants of the hillsides to the north. This feeling was increased in the next few years by the unsightly tangle presented by the water-killed timber. The clearing is now

being completed with considerable difficulty and limited by the changing stage of the water level.

It seems obvious that there is real economy in completing the preparation of the area to be flooded before the water is impounded.

Hydroelectric Development, Bridgewater, N. C.

PHYSICAL CONDITIONS

The Bridgewater Pond is located in Burke and McDowell Counties, N. C., and is formed by three dams—one on the Catawba River, one on Paddy Creek, and one on the Linville River. It is, therefore, composed of three main arms, each with numerous bights, and has a total flooded area of 6,510 acres with the water standing at the crest of the spillway, the elevation of which is 1,200 feet. The water in the pond is clear. The surrounding territory is hilly to mountainous, rather heavily wooded, and the population is sparse.

Precipitation records, kept at the Linville Dam since May, 1919, indicate an annual total of about 54 inches, with more than 5 inches in each month from March through August, followed by a sharp decline in the next three months.

Monthly mean normal temperature at Marion (the closest Weather Bureau observation station, about 12 miles from the pond) reaches a maximum of 75.2° in July and is above 70° from about June 1 through August 20. Actual monthly means for 1923 were close to the normal. The average date of last killing frost in the spring is April 17 and the first in the fall October 24, but in 1923 the last temperature of 32° occurred on May 9 and the first in the fall on November 1. Surface temperatures in the pond varied from 82° to 86° in mid-August, 1923.

HISTORY OF PROJECT

The project was completed in January, 1920, and water first ran over the spillway on May 4, 1922. The flooded area was well cleared. There is no brush or timber standing below high-water line.

The shore line of Catawba Pond is generally steep and free from trash. There is an area of shallow overflow at full pond near the upper end on the left bank which has grown up in grass and weeds. At the upper ends of some bights are flat areas supporting grass and aquatic growths. The shore line of Paddy Creek Pond is mostly steep and clean, with little or no trash in the bights. At the extreme upper end of the south fork of this pond is a shallow grassy area. The Linville Pond has a more gently sloping shore line, wider bights, and more trashy edges than the other ponds.

Around the pond, and at varying distances from it, is a highway in the construction of which considerable fill was necessary in various gulleys leading to the pond. Almost invariably the culverts through

these fills were placed too high to drain the gully above the road. There has resulted a series of pools, fringed with willow and filled with cat-tail and aquatic growths.

The construction of the project has diverted the flow from the bed of the Catawba River to the Linville River, with the result that the old Catawba Channel is a series of pools and seepage areas for a distance of at least a mile below the dam. Here a considerable growth of cat-tail and algæ flourishes.

FIELD OBSERVATIONS

Two inspections of this pond were made in 1923—one early in July, the other in mid-August. At the time of the July inspection the water level was about 5 feet below the spillway and had only recently started to fall. In August it was down between 7 and 8 feet.

The area of shallow overflow at the upper end of the Catawba Pond was exposed both in July and August. In the grass and aquatic growths at the upper ends of bights occasional small and half-grown *Anopheles* larvæ were found at the time of each visit, chiefly near the mouths of entering streams. In the shallow, grassy area at the upper end of Paddy Creek Pond a few half-grown *Anopheles* larvæ and many small ones, as well as some non-*Anopheles* larvæ, were found. In three bights of the Linville Pond, each with trashy edges, only a few small larvæ were found, *Anopheles* and non-*Anopheles*. No *Gambusia* were seen in the pond at either visit.

The pools above the highway surrounding the pond were found to contain larvæ in large numbers both in July and August, but there were more non-*Anopheles* than *Anopheles*. Below the dam, in the old Catawba River Channel, larvæ and pupæ of both *Anopheles* and non-*Anopheles* were found, particularly in seepage, and were more numerous in July than in August. The algæ in these pools were much more profuse in August than in July, and some of the pools were full of dead algæ in August. Emergences from collections of larvæ and pupæ made at these pools at each visit were *A. punctipennis*, with the exception of one female *A. crucians* which emerged from the August collection. No search was made here for adults in July, but in August near-by resting places were searched and yielded three *A. punctipennis* and one female *A. quadrimaculatus*. The latter was found resting under the overhanging turf at the top of a sandy bank about 150 yards below the Catawba Dam and on the right bank of the river.

Borrow pits along the railroad near the Bridgewater station yielded larvæ of non-*Anopheles* only, and a seepage area between the railroad and the hill, with water temperature of 75° in August,

yielded no larvæ whatever. Pockets in small streams in the vicinity of the pond were found to contain considerable numbers of *Anopheles* larvæ. Adults caught in near-by resting places were *A. punctipennis* without exception.

The water level in this pond changes gradually, rising from February to May or June, then remaining fairly constant, close to full pond, until early August, followed by a gradual fall to January or February. The maximum change in level recorded has been 53.9 feet. This cycle has been repeated in each of the four years since the pond was formed, and may be considered as normal behavior, since the pond is primarily a storage reservoir for the benefit of plants lower down the river. The fact that the change in water level is gradual might be expected to be favorable for mosquito production, but the shores are generally so clean as to present little protection for larvæ. The rather heavy rainfall from May through August, causing the frequent washing out of entering streams, may account for the presence of larvæ in the pond, as it was rare that they were found far from the mouths of streams.

COMMENTS

This pond, located in the mountains of North Carolina, with clear water, without unsightly water-killed timber, stocked with game fish, and circled by a good highway, attracts great numbers of visitors in the summer months. It has added materially to the natural beauty of the region, quite aside from its economic value in tending to equalize the flow of the Catawba River through the piedmont and in the production of electric power.

Observations during 1923 indicate that the production of anopheline mosquitoes from the pond was slight. The pools below the Catawba Dam and those caused by the improper placing of culverts along the encircling highway appear to be the chief potential sources of these mosquitoes. This, then, seems to be an example of the need to consider the territory adjacent to the pond, as well as the flooded area itself, in seeking to prevent conditions due to the impounding of water, which may cause an increase in the production of anopheline mosquitoes.

Hydroelectric Development, Mountain Island, N. C.

PHYSICAL CONDITIONS

The Mountain Island project, completed in January, 1924, is located on the Catawba River in Gaston and Mecklenburg Counties, N. C., 12 miles northwest of Charlotte. The pond is 16 miles long and easily a mile wide at several points. There are numerous bights,

some of which leave the pond through a narrow neck and widen beyond with areas of shallow overflow at the upper ends.

The topography of the area is rolling, the soil is sandy, with clay subsoil, and the territory generally is under cultivation and rather well settled. Small streams entering the area have good fall and sandy beds in most cases. Precipitation and temperature recorded at Charlotte and Mount Holly are similar to those at Albemarle and Badin.

HISTORY OF MALARIA

Malaria, as reported by the county health officers and local physicians, is present, but not to any great degree. Individual cases are scattered through the district. One small focus was found in the immediate vicinity of two brickyards just west of the town of Mount Holly and about 4 miles from the dam. The labor employed on the construction of the project, both white and colored, was largely imported from other sections of the South. Some histories of malaria were found among them, with a few relapses reported in the spring of 1923. A small number of cases were reported in September.

FIELD OBSERVATIONS

The area was visited in July, August, and September, 1923. The construction camp was located on the hill on the right bank of the river just below the dam and housed about 500 people, including employees' families and 100 white convicts. Sanitation at the contractor's camp was poor. The quarters consisted chiefly of the abandoned houses of a mill village (the mill had been destroyed by the flood of 1916 and not rebuilt), partly of tar-papered three-room shacks, and partly of tents. The water supply was obtained from three wells and a spring at the foot of the hill below the camp, entirely unprotected from surface drainage. Pit privies were scattered all over the hillside. Screening was incomplete and haphazard—12, 14, and 16 mesh being observed. The convict camp was in much better condition. Quarters were of barrack type, screened with 14-mesh (except for the ventilators on the roof, the screens of which were said to have become dust clogged to such an extent as to stop the circulation of air and were therefore removed); the water supply was derived from a driven well across a ravine from the contractor's camp; the privies were of the can type; and the whole camp was regularly policed. Various areas suitable for the production of mosquitoes in the vicinity of the camp and dam were found to yield larvæ of *Anopheles* and non-*Anopheles* in some numbers. Emergencies from collections of larvæ, as well as all adults caught, were *A. punctipennis*.

The raising and lengthening of a steel bridge about 3 miles above the dam was a part of the project. A small camp back from the right bank of the river at the bridge was maintained for the labor on this work. In pockets of small streams near by a few small larvæ of *Anopheles* were found, but no adults either at the camp or in natural resting places in the vicinity. About a quarter of a mile above the bridge on the right bank of the river was a swampy pasture. Here larvæ and pupæ of *Anopheles* and non-*Anopheles* were found in considerable numbers. Emergences from collections made here were all *A. punctipennis*.

It was also necessary to construct a new water pumping station for the city of Charlotte as a part of this project. The new station is on the left bank of the pond and about 2 miles above the bridge just mentioned. Here another small camp was maintained. No larvæ were found in a near-by stream, although water containers at the camp were found to be producing non-*Anopheles* profusely. No adult *Anopheles* were found in the tents. Just north of the road leading to the pumping station, and about half a mile from the pond, is a swampy gully. Here were found larvæ of non-*Anopheles* in great numbers and some *Anopheles* in July, although no adults were found in a near-by cow shed.

Clearing of the area to be flooded was rather well done and was completed in the spring of 1923. The operating company established a medical department at the beginning of the summer, with the prevention of the production of anopheline mosquitoes at Mountain Island as its chief duty. Under the direction of this department, that portion of the basin near the flow line was recleared later in the summer to remove such small brush and weeds as had grown up since spring.

The establishment of small ponds just above the high-water line to act as distribution points for *Gambusia* was started in August. These ponds were so located as to be easily accessible by highway and by boat after the area is flooded. Large numbers of gravid fish were obtained through the cooperation of the United States Bureau of Fisheries. Near one of these ponds was a small swampy area in which numerous larvæ of *Anopheles* were found. All emergences from collections of these larvæ were *A. punctipennis*, as were all adults caught, with the exception of one specimen of *A. crucians* found in an upturned molasses vat.

Considerable numbers of larvæ of *Anopheles* were found in pockets of streams entering the area, in various swampy areas, and in small pools in the river bottom. Emergences from collections of larvæ made in such places, as well as all specimens of adults caught in the vicinity, were invariably *A. punctipennis*. At the brickyards near Mount Holly larvæ of *Anopheles* and non-*Anopheles* were found

in great numbers in old clay pits grown up in cat-tails and containing much algæ. Emergences from collections of larvæ made here were *A. punctipennis*. A few adults, both *A. punctipennis* and *A. quadrimaculatus*, were found in a near-by stable. None was found in natural resting places nearer the production area. This point was visited in September, on the first cold day of fall, which may account for the scarcity of adults in apparently favorable resting places.

COMMENTS

This pond is located in a section in which malaria is not considered prevalent, in which industrial development is progressing rapidly, and close to one of the largest cities of North Carolina. It may, therefore, be expected that many people will visit the pond and that the surrounding hillsides will become the site of summer camps and clubhouses.

The area to be flooded was well cleared, particular attention was given to that part near the flow line which was cleared twice; distribution points for *Gambusia* were established; the water was impounded during January, and continued observation of the pond was provided for. There seems to have been no attempt made to protect the imported labor, yet no increase of malaria was reported in the fall of 1923. It would appear that unusual efforts have been made to prevent an increase in the production of anopheline mosquitoes resulting from the impounding of this water.

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT FOR MAY 15, 1925, ISSUED BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT¹

Current morbidity and mortality reported to the Health Section of the League of Nations' Secretariat in the month preceding the publication of the Monthly Epidemiological Report of May 15 showed no change in the generally favorable health situation which had prevailed in many parts of the world during the preceding months. For the most part, only the normally expected variations have occurred in the prevalence of the various diseases referred to each month in the report.

Plague.—Plague cases reported indicate a lower prevalence than for several years past for the corresponding season in practically all localities, with the marked exception of Java, where cases have been unusually numerous. The incidence in Java has been diminishing since January, but the deaths reported for four weeks ending February 25 numbered 1,562—twice as many as in February, 1924.

¹ From the Statistical Office, United States Public Health Service.

The increase in the deaths from plague in India for the first half of March was slight for this season, and the 16,212 deaths from this disease reported in the four weeks ended March 14 were only one-half the number for the same period last year. "The improvement is greatest compared with last year in the Punjab and the Middle Ganges Valley, and the incidence is relatively low also in Burma and the Presidency of Bombay." The highest number of deaths was reported in the United Provinces.

Hongkong has been free from plague since September, 1923.

The plague situation in the Mediterranean ports and near-by areas is stated as follows:

"No case of plague is known to have occurred in any port in the Mediterranean or Black Sea in February, March, or April.

"In Egypt, where no case had been reported in February or March, there were 9 cases between April 1 and 22, of which 2 were in Suez. No new case was reported during the following week. This is remarkable, in view of the fact that plague usually reaches its maximum prevalence in May in Egypt and neighboring countries.

"There has been no case of plague in Palestine and Syria since the beginning of the year and only 2 cases in Iraq (during the fortnight ending April 14), where the disease existed in epidemic form at the corresponding season of the two preceding years."

Very few cases of plague have been reported lately from Africa. The outbreaks in Nigeria and the Gold Coast appear to have come to an end, and the Union of South Africa reported only 7 cases in the 3 weeks ended April 4. Mauritius seems to be practically free from plague, only 1 case having been reported there in 5 weeks, and in Madagascar there were fewer cases in March than in February. Only in Uganda is an increase noted: 73 deaths were reported in March compared with 27 in February.

Cholera.—Cholera incidence declined in India during the 4 weeks ended March 14, during which period 4,661 deaths were reported as compared with 5,780 deaths during the preceding 4 weeks. The decline occurred almost entirely in Madras Presidency. The same number of deaths occurred last year at this date.

Ceylon, Indo-China, and Siam also reported a few cases, and Singapore reported 1 case between April 12 and May 9. "No case has been reported this year from any locality west of India."

Typhus and relapsing fever.—"The incidence of typhus remains unusually low throughout eastern Europe; the maximum appears to have occurred early in the year, as is frequently the case when the prevalence is diminishing rapidly.

"Relapsing fever is practically disappearing from all its old centers.

"The most important outbreak of relapsing fever during recent months was that in Nigeria, where the disease is said to have been

imported in 1923 and where it caused considerable mortality in 1924. In January of the current year 42 cases were reported, and in February, 394, whereas no case occurred during the corresponding months of 1924."

Smallpox.—In Algeria and Tunis, where small outbreaks of smallpox have occurred, the number of new cases was on the decline in April. In Algeria, the maximum number occurred in January, with 170 cases, and the number declined to about 100 per month in March and April. The maximum came later in Tunis, with 206 cases in March, followed by a decline to 129 cases in April.

In England 630 cases of smallpox were reported during the 4 weeks ended May 2, compared with 550 cases during the preceding 4 weeks. It continued to be the same mild type previously noted.

Smallpox has increased in India during the last two years. "The highest incidence has occurred in southern India—last year in Bombay Presidency, this year in Madras Presidency; but, although northern India remains less seriously infected, an increase is seen in the returns for these Provinces also, especially in Bengal and Bihar and Orissa."

TABLE 1.—Cases of smallpox in the Provinces of India, January 18 to March 14, 1925

Province	1925		1924
	Jan. 18 to Feb. 14	Feb. 15 to Mar. 14	Feb. 17 to Mar. 15
Northwest frontier.....	14	10	8
Punjab.....	576	602	167
Delhi.....	0	0	0
United Provinces.....	63	195	15
Bihar and Orissa.....	2,434	2,913	1,846
Central Provinces.....	887	1,634	429
Madras Presidency.....	4,513	5,565	2,575
Hyderabad State.....	556	40	35
Bombay Presidency.....	2,352	3,859	11,913
Bengal Presidency.....	2,517	3,783	815
Assam.....	116	200	101
Burma.....	779	1,440	682
Other Indian States.....	29	170	357
Total.....	14,841	20,351	18,948

Nigeria reported a sudden increase from 12 cases of smallpox in January to 409 in February.

Enteric fever.—The incidence of enteric fever declined markedly during the winter and early spring months in the European countries where a relatively high prevalence was reported in the late autumn of 1924.

TABLE 2.—Cases of enteric fever notified in various European countries in 1923 and 1924, and beginning of 1925

Month	Sweden		Finland		Latvia		Czechoslovakia		Bulgaria	
	1923-24	1924-25	1923-24	1924-25	1923-24	1924-25	1923-24	1924-25	1923-24	1924-25
May.....	67	42	109	54	67	73	255	322	91	32
June.....	69	78	100	53	80	140	287	476	63	72
July.....	46	131	262	75	76	227	390	645	82	134
August.....	50	213	137	178	127	243	568	805	163	264
September.....	86	257	156	221	101	236	771	690	332	606
October.....	64	249	280	499	113	129	775	805	464	1,883
November.....	67	91	159	333	78	124	701	807	522	2,122
December.....	47	80	90	123	89	90	518	602	499	1,432
January.....	66	93	29	146	77	98	510	514	244	611
February.....	63	77	36	87	83	62	361	454	162	241
March.....	93	40	26	84	85	-----	351	335	110	112

Four weeks ending—	England and Wales		Germany		Poland		Kingdom of Serbs, Croats, and Slovenes		Italy	
	1923-24	1924-25	1923-24	1924-25	1923-24	1924-25	1923-24	1924-25	1923-24	1924-25
June 14.....	177	369	725	722	686	605	87	122	873	820
July 12.....	253	578	1,049	1,125	723	715	147	159	1,210	1,432
Aug. 9.....	309	386	1,289	1,680	805	1,060	262	298	2,390	2,153
Sept. 6.....	311	376	1,620	1,967	1,025	1,546	348	471	4,109	3,469
Oct. 4.....	416	451	1,660	1,890	1,500	2,374	584	1,113	4,816	3,932
Nov. 1.....	370	422	1,376	1,545	1,904	2,428	498	1,368	3,777	3,416
Nov. 29.....	235	242	1,410	1,104	1,541	2,242	472	1,107	3,231	3,137
Dec. 27.....	218	247	1,153	816	1,234	1,549	398	650	2,190	1,790
Jan. 24.....	204	162	778	723	951	1,312	287	376	1,441	1,015
Feb. 21.....	218	172	733	641	918	1,004	217	266	935	744
Mar. 21.....	156	152	608	549	665	925	172	206	651	-----
Apr. 18.....	174	143	636	-----	596	-----	134	-----	634	-----

Influenza.—"The comparatively low incidence of influenza in most countries during the first period of 1925 is reflected in the general death rate, which is more favorable than that of the early months of 1924," states the report. The number of deaths from influenza in "105 English cities" has been diminishing since the beginning of March and reached the low figure of 100 in the week ended May 2. In the "46 German cities," however, influenza deaths increased during March and the first part of April, with 281 deaths from this cause reported in the 2 weeks ended April 11.

Lethargic encephalitis.—No marked epidemics of lethargic encephalitis are indicated, but "a certain prevalence is reported from most European countries." Fifty-four cases were reported in the Netherlands for the 8 weeks ended April 26, compared with 19 cases in the previous 8 weeks. Czechoslovakia reported 40 cases in March and 25 in February, and in Italy an increased incidence occurred in February and March. In England and Wales the incidence was somewhat lower in April than in March, but the fluctuations in the last 9 months have been less than usual.

Poliomyelitis.—The outbreaks of poliomyelitis in New Zealand, noted last month, continued at about the same level during March, 395 cases having been reported during the 4 weeks ended March 23

and 409 cases during the preceding 4 weeks. The incidence in the province of Wellington declined in March, but more cases were reported from the other provinces. The report notes: "The disease is stated to have mostly attacked children between 2 and 3 years of age; the incidence was higher in rural districts and the more congested city areas escaped lightly. Good results are claimed from treatment by injection of serum obtained from convalescent cases."

Cerebrospinal meningitis.—No epidemic prevalence of cerebrospinal meningitis is noted in the reports of any country of Europe or North America in the past winter.

An outbreak occurred in Nigeria in February, with 376 deaths reported, and in Uganda 80 cases were notified in February.

Scarlet fever and diphtheria.—Both scarlet fever and diphtheria continued to be more prevalent in western and central Europe in March and April than at this season last year, while the incidence has been relatively low in eastern and southeastern Europe.

Measles.—A recrudescence of measles in March in all countries for which information was available is noted by the report. "The increase is smaller than at the corresponding season of 1924 in Great Britain and Denmark, but greater in France, Hungary, Bulgaria, Poland, and Italy."

The following details of a severe epidemic in Nyasaland in February are given:

"The first 24 cases were reported in the district of Chikwawa, where 29 cases occurred in February. The disease appeared suddenly in the district of Lilongwe in February, when 1,850 cases were reported; there have been no cases, so far, in other districts with the exception of 2 in Blantyre. The case mortality is unusually high and is stated to be 7.3 per cent in Lilongwe."

Trachoma.—The following data on the prevalence of trachoma are given in the report:

TABLE 3.—Cases of trachoma notified in 1924 and first quarter of 1925

Country	Quarter				Total 1924	1925
	I	II	III	IV		I
Germany.....	288	454	528	514	1,784	487
Austria.....	90	50	58	226	424	175
Danzig.....	8	6	15	25	54	9
Estonia.....	161	121	102	147	531	142
France.....		38	12	8	58	8
Poland.....	496	870	940	638	2,944	940
Dominican Republic.....	1	0	4	5	10	0
Switzerland.....	3	1	6	3	13	2
Czechoslovakia.....	766	804	644	568	2,782	651
Saar Territory.....	0	1	0	2	3	4
Tunis.....	45	54	0	24	123	24
Ukraine.....	6,172	11,529			17,701	
United States (24 States).....	257	841	351	448	1,897	282
Panama Canal Zone.....	1	0	3	0	4	0
New Zealand.....	11	2	2	5	20	
Turkey.....						^b 162

^a For February only.

^b For 12 weeks only.

^c For 2 quarters on y.

UNITED STATES CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission announces the following open competitive examinations:

PHYSIOTHERAPY AIDE—PHYSIOTHERAPY PUPIL AIDE—PHYSIOTHERAPY ASSISTANT

Receipt of applications for these positions will close July 25, August 29, September 26, October 24, and November 28, 1925. The dates for the assembling of competitors will be stated on the admission cards sent applicants after the close of receipt of applications.

In the Public Health Service the entrance salary for physiotherapy aide is \$1,020 a year, with quarters, subsistence, and laundry; for physiotherapy pupil aide, \$720 a year, with quarters, subsistence, and laundry, or \$1,200 a year without allowances. The salary of physiotherapy assistant is \$1,500 a year, without allowances.

In the Veterans' Bureau the entrance salary for physiotherapy aide is \$1,680 a year; for physiotherapy pupil aide, \$1,000 to \$1,400 a year, depending upon the training and experience of the appointee. The compensation of physiotherapy assistant is \$1,320 to \$1,600 a year.

The duties of physiotherapy aides consist of administering physiotherapy in its several branches—massage, electrotherapy, hydrotherapy, mechanotherapy, thermotherapy; active, passive, resistive, and assistive exercises and remedial gymnastics; keeping daily record of the work and progress of each and every patient coming under direction and treatment; and making the required reports of the activities of the reconstruction work in physiotherapy.

The duties of physiotherapy pupil aides are the same as those for physiotherapy aide, except that they are pupils under the supervision and instruction of the chief aide in all the work above mentioned.

The duties of physiotherapy assistants consist of administering to special patients the treatments of physiotherapy, as massage, electrotherapy, hydrotherapy, thermotherapy, mechanotherapy; active, passive, assistive, and resistive exercises; remedial gymnastics; keeping a daily record of the work and progress of each patient under the appointee's direction and treatment; and making the required reports of the activities of the reconstruction work in physiotherapy.

GRADUATE NURSE—GRADUATE NURSE (VISITING DUTY)

Applications for graduate nurse and graduate nurse (visiting duty) will be rated as received until December 30, 1925. The examinations are to fill vacancies in the United States Veterans' Bureau and in the Indian and Public Health Services.

The usual entrance salaries for these positions are \$1,500 a year, with quarters, heat, and light, in the Indian Service; \$1,020 a year, with quarters, subsistence, and laundry, in the Public Health Service; and \$1,680 a year in the Veterans' Bureau.

Applicants for the position of graduate nurse must have been graduated from a recognized school of nursing requiring a residence of at least two years in a hospital having a daily average of 30 patients or more, giving a thorough practical and theoretical training, and must show evidence of State registration.

In addition to the requirements for graduate nurse, applicants for the position of graduate nurse (visiting duty) must have had at least four months' post-graduate training in public-health or visiting nursing at a school of recognized standing, or, in lieu of such training, one year's full-time paid experience under supervision in public-health or visiting nursing.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

DIETITIAN

Applications for dietitian will be rated as received until December 30, 1925. The examination is to fill vacancies under the Public Health Service at an entrance salary of \$1,020 a year, with quarters, subsistence, and laundry, and under the Veterans' Bureau at an entrance salary of \$1,680 a year. In the Public Health Service advancement in pay may be made without change in assignment up to \$1,800 a year, with quarters, subsistence, and laundry. In the Veterans' Bureau advancement in pay may be made without change in assignment up to \$2,500 a year.

The duties of this position are to purchase the food supplies for all messes operated in the hospital; to plan all menus, both for patients on ordinary diets and diets with reference to special diseases; and to supervise the preparation and serving of all dietaries in the hospital, both to patients and personnel.

Applicants must have been graduated from a course of at least two years in home economics in a recognized college, such course to have included at least one year in chemistry, one year in biological science (including physiology and bacteriology), and one year in food preparations; also courses in mass cooking, in nutrition, and in dietetics. In addition, applicants must have had at least three months of graduate experience as student dietitian in a hospital or other institution for the care of the sick of not less than 40 beds.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Full information regarding the above-mentioned examinations and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of United States civil-service examiners at the post office or customhouse in any city.

DEATHS DURING WEEK ENDED JUNE 13, 1925

Summary of information received by telegraph from industrial insurance companies for week ended June 13, 1925, and corresponding week of 1924. (From the Weekly Health Index, June 16, 1925, issued by the Bureau of the Census, Department of Commerce)

	Week ended June 13, 1925	Corresponding week, 1924
Policies in force.....	60, 189, 649	56, 324, 470
Number of death claims.....	12, 660	10, 877
Death claims per 1,000 policies in force, annual rate..	11. 0	10. 1

Deaths from all causes in certain large cities of the United States during the week ended June 13, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, June 16, 1925, issued by the Bureau of the Census, Department of Commerce)

City	Week ended June 13, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate, week ended June 13, 1925 ²
	Total deaths	Death rate ¹		Week ended June 13, 1925	Corresponding week, 1924	
Total (64 cities).....	8, 103	15.3	³ 11.8	871	³ 736	74
Akron.....	26			4	2	44
Albany ⁴	45	19.6	22.9	7	6	152
Atlanta.....	77			14	6	
Baltimore ⁴	338	22.1	11.0	26	19	78
Birmingham.....	93	23.6	16.4	13	12	
Boston.....	242	16.1	14.0	22	28	58
Bridgeport.....	23			2	3	32
Buffalo.....	170	16.0	12.0	20	20	81
Cambridge.....	42	19.5	18.6	6	5	103
Camden.....	45	18.2	12.8	7	7	111
Chicago ⁴	670	11.7	11.4	59	70	52
Cincinnati.....	127	16.2	15.2	2	14	12
Cleveland.....	165	9.2	10.1	20	28	50
Columbus.....	72	13.4	11.5	9	10	83
Dallas.....	54	14.6	14.7	13	12	
Denver.....	73	13.6	13.8	3	5	
Des Moines.....	20	7.0	9.3	3	1	51
Detroit.....	247			46	40	79
Duluth.....	22	10.4	9.1	5	4	108
Erie.....	25			4	4	78
Fall River ⁴	47	20.2	14.2	7	10	101
Flint.....	16	6.4	8.4	3	3	47
Fort Worth.....	29	9.9	7.7	4	2	
Grand Rapids.....	37	12.6	10.9	2	4	31
Houston.....	37	11.7	11.7	8	1	
Indianapolis.....	69	10.0	12.0	3	9	21
Jersey City.....	103	17.0	9.7	15	10	106
Kansas City, Kans.....	29	12.2	15.4	5	6	105
Kansas City, Mo.....	67	9.5	12.8	16	6	
Los Angeles.....	220			31	28	85
Louisville.....	70	14.1	10.9	11	6	96
Lowell.....	31	13.9	17.6	3	5	52
Lynn.....	21	10.5	9.1	1	3	27
Memphis.....	66	19.7	16.3	10	10	
Milwaukee.....	103	10.7	8.8	11	12	51
Minneapolis.....	84	10.3	11.7	12	8	64
Nashville ⁴	42	16.1	16.5	7	4	
New Bedford.....	31	12.0	9.0	4	5	66
New Haven.....	43	12.5	11.0	1	4	13
New Orleans.....	137	17.2	22.4	22	26	
New York.....	2, 054	17.5	10.8	208	142	83
Bronx borough.....	268	15.5	9.5	18	10	62
Brooklyn borough.....	680	15.9	8.9	83	44	85
Manhattan borough.....	863	19.9	13.2	89	71	93
Queens borough.....	188	17.1	8.5	15	12	70
Richmond borough.....	55	21.4	17.6	3	5	54
Newark, N. J.....	145	16.7	10.2	18	12	82
Norfolk.....	32			6	9	111
Oakland.....	51	10.5	7.8	7	5	81
Oklahoma City.....	34			3	1	
Onaha.....	57	14.0	16.5	3	8	31
Pateron.....	49	18.0	7.8	6	2	101
Philadelphia.....	907	23.9	11.4	88	50	111
Pittsburgh.....	181	14.9	12.7	26	16	86
Portland, Oreg.....	61	11.3	9.2	7	2	70
Providence.....	85	18.1	12.8	11	11	88
Richmond.....	40	11.2	18.4	5	9	60
Rochester.....	87	13.7	10.9	11	7	88
St. Louis.....	192	12.2	13.3	19	13	
St. Paul.....	72	15.3	12.8	6	1	51
Salt Lake City ⁴	33	13.1	14.2	7	3	110
San Antonio.....	64	16.8	16.6	16	15	
San Francisco.....	143	13.4	13.5	5	8	29

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1924. Cities left blank are not in the registration area for births.

³ Data for 63 cities.

⁴ Deaths for week ended Friday, June 12, 1925.

Deaths from all causes in certain large cities of the United States during the week ended June 13, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924—Continued

City	Week ended June 13, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate, week ended June 13, 1925
	Total deaths	Death rate		Week ended June 13, 1925	Corresponding week, 1924	
San Diego.....	31	16.1		3		70
Schnectady.....	28	14.3	7.3	5	2	141
Seattle.....	58			6	7	58
Somerville.....	34	17.4	8.3	8	1	214
Spokane.....	35	16.8	9.0	2	0	45
Springfield, Mass.....	50	17.1	12.6	10	4	149
Syracuse.....	35	9.5	11.6	2	6	25
Tacoma.....	24	12.0	12.1	2	2	47
Toledo.....	70	12.7	12.8	7	10	63
Trenton.....	69	27.3	14.9	6	6	99
Washington, D. C.....	141	14.8	11.8	10	8	56
Waterbury.....	26			4	3	86
Wilmington, Del.....	39	16.7	9.6	3	1	68
Worcester.....	42	11.0	9.1	5	7	58
Yonkers.....	22	10.3	7.6	2	4	44
Youngstown.....	22	7.2	10.1	3	6	37

MASSACHUSETTS—continued

	Cases
Septic sore throat.....	3
Tetanus.....	1
Tuberculosis (pulmonary).....	133
Tuberculosis (other forms).....	28
Typhoid fever.....	7
Whooping cough.....	119

MICHIGAN

Diphtheria.....	45
Measles.....	449
Pneumonia.....	78
Scarlet fever.....	202
Smallpox.....	28
Tuberculosis.....	70
Typhoid fever.....	3
Whooping cough.....	174

MONTANA

Chicken pox.....	2
Diphtheria.....	1
German measles.....	4
Influenza.....	1
Measles.....	2
Mumps.....	2
Rocky Mountain spotted fever:	
Hardin.....	1
Laurel.....	1
Scarlet fever.....	21
Smallpox.....	5
Tuberculosis.....	5
Whooping cough.....	2

NEW JERSEY

Cerebrospinal meningitis.....	1
Chicken pox.....	231
Diphtheria.....	60
Influenza.....	3
Leprosy.....	2
Measles.....	362
Pneumonia.....	63
Poliomyelitis.....	4
Scarlet fever.....	97
Smallpox.....	3
Typhoid fever.....	5
Whooping cough.....	197

NEW MEXICO

Chicken pox.....	2
Measles.....	3
Mumps.....	2
Pneumonia.....	2
Puerperal septicemia.....	1
Tuberculosis.....	16
Typhoid fever.....	5
Whooping cough.....	8

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis.....	4
Diphtheria.....	81
Influenza.....	3
Lethargic encephalitis.....	2
Measles.....	666
Pneumonia.....	122
Poliomyelitis.....	3
Scarlet fever.....	136
Smallpox.....	12
Typhoid fever.....	14
Whooping cough.....	193

1 Deaths.

NORTH CAROLINA

	Cases
Cerebrospinal meningitis.....	1
Chicken pox.....	50
Diphtheria.....	19
German measles.....	12
Measles.....	5
Scarlet fever.....	8
Smallpox.....	49
Typhoid fever.....	49
Whooping cough.....	122

OREGON

Cerebrospinal meningitis.....	2
Chicken pox.....	2
Diphtheria:	
Portland.....	15
Scattering.....	11
Influenza.....	1
Mumps.....	9
Pneumonia.....	19
Scarlet fever.....	12
Smallpox.....	7
Tuberculosis.....	11
Typhoid fever.....	2
Whooping cough.....	9

SOUTH DAKOTA

Cerebrospinal meningitis.....	1
Diphtheria.....	3
Mumps.....	3
Pneumonia.....	1
Scarlet fever.....	5
Smallpox.....	4
Typhoid fever.....	1

TEXAS

Cerebrospinal meningitis.....	2
Chicken pox.....	10
Diphtheria.....	6
Influenza.....	4
Measles.....	13
Mumps.....	9
Pellagra.....	8
Pneumonia.....	2
Poliomyelitis.....	6
Scarlet fever.....	14
Smallpox.....	7
Tuberculosis.....	17
Typhoid fever.....	20
Whooping cough.....	34

VERMONT

Chicken pox.....	12
Measles.....	32
Mumps.....	9
Scarlet fever.....	5
Whooping cough.....	5

VIRGINIA

Smallpox.....	6
Typhus fever—Prince George County.....	2

WEST VIRGINIA

Diphtheria.....	2
Scarlet fever.....	11
Smallpox.....	4

Reports for Week Ended June 13, 1925

DISTRICT OF COLUMBIA		NORTH DAKOTA	
	Cases		Cases
Cerebrospinal meningitis.....	1	Chicken pox.....	7
Chicken pox.....	4	Diphtheria.....	2
Diphtheria.....	6	German measles.....	7
Lethargic encephalitis.....	1	Mumps.....	2
Measles.....	28	Pneumonia.....	2
Pneumonia.....	26	Scarlet fever.....	12
Scarlet fever.....	5	Smallpox.....	7
Tuberculosis.....	26	Tuberculosis.....	2
Typhoid fever.....	2	Typhoid fever.....	1
Whooping cough.....	14	Whooping cough.....	35

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Polio-myelitis	Scarlet fever	Smallpox	Typhoid fever
<i>April, 1925</i>										
Montana.....	2	36	14		97			144	35	5
Utah.....	2	39	548		18			35	0	10
<i>May, 1925</i>										
Alabama.....	1	38	434	287	59	173	5	153	511	147
Delaware.....	0	10	1		30	0		18	4	1
District of Columbia	0	65	3	0	151	0	0	92	4	9
Florida.....	1	31	71	35	7	9	3	12	24	59
Maryland.....	3	114	122	3	145	0	2	224	4	21
Minnesota.....	1	341	28		189	0	1	1,033	83	13
New Jersey.....	6	300	39		2,106		3	985	37	27
New York.....	14	1,573	280	7	3,667		14	2,399	31	140
North Dakota.....	0	20	17		13		2	166	19	2
Ohio.....	9	329	94	1	1,976	0	1	1,569	331	57
Oklahoma.....	3		455	131	18	41	1	145	54	85
Pennsylvania.....	8	880		4	8,159		2	2,358	37	74
Rhode Island.....	2	29	2				1	75	11	3
Virginia.....	0	48	109		628		1	210	85	25
Wyoming.....	1	21	12		23			18	1	1

PLAGUE-ERADICATIVE MEASURES IN THE UNITED STATES

The following items were taken from the reports of plague-eradicator measures from the cities named:

Oakland, Calif.

(Including other East Bay communities)

Week ended June 6, 1925:

Number of rats trapped.....	1,530
Number of rats found to be plague infected.....	0
Number of squirrels examined.....	589
Number of squirrels found to be plague infected.....	0

Totals:

Number of rats trapped Jan. 1 to June 6, 1925.....	51,350
Number of rats found to be plague infected.....	21
Number of squirrels examined May 1 to June 6, 1925.....	2,574
Number of squirrels found to be plague infected.....	0

Date of discovery of last plague-infected rat, Mar. 4, 1925.

Date of last human case, Sept. 10, 1919.

New Orleans, La.

Week ended June 6, 1925:

Number of vessels inspected.....	243
Number of inspections made.....	613
Number of vessels fumigated with cyanide gas.....	14
Number of rodents examined for plague.....	4, 949
Number of rodents found to be plague infected.....	0

Totals, Dec. 5, 1924, to June 6, 1925:

Number of rodents examined for plague.....	118, 609
Number of rodents found to be plague infected.....	12

Date of discovery of last plague-infected rat, Jan. 17, 1925.

Date of last human case occurring in New Orleans, Aug. 20, 1920.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended June 6, 1925, 34 States reported 1,344 cases of diphtheria. For the week ended June 7, 1924, the same States reported 1,557 cases of this disease. One hundred and one cities, situated in all parts of the country and having an aggregate population of more than 28,700,000, reported 872 cases of diphtheria for the week ended June 6, 1925. Last year for the corresponding week they reported 918 cases of diphtheria. The estimated expectancy for these cities was 882 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-one States reported 6,162 cases of measles for the week ended June 6, 1925, and 9,208 cases of this disease for the week ended June 7, 1924. One hundred and one cities reported 3,374 cases of measles for the week this year and 3,199 cases last year.

Scarlet fever.—Scarlet fever was reported for the week as follows: 34 States—this year, 2,830 cases; last year, 2,747 cases; 101 cities—this year, 1,475 cases; last year, 1,234; estimated expectancy, 800 cases.

Smallpox.—For the week ended June 6, 1925, 34 States reported 819 cases of smallpox. Last year for the corresponding week they reported 1,292 cases. One hundred and one cities reported smallpox for the week as follows: 1925, 256 cases; 1924, 463 cases; estimated expectancy, 107 cases. These cities reported 12 deaths from smallpox for the week this year.

Typhoid fever.—Five hundred and nineteen cases of typhoid fever were reported for the week ended June 6, 1925, by 33 States. For the corresponding week of 1924 the same States reported 296 cases. One hundred and one cities reported 136 cases of typhoid fever for the week this year, and 90 cases for the corresponding week last year. The estimated expectancy for these cities was 72 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia (combined) were reported for the week by 101 cities as follows: 1925, 746 deaths; 1924, 606 deaths.

City reports for week ended June 6, 1925

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	73, 129	3	2	0	0	0	1	12	0
New Hampshire:									
Concord	22, 408	0	0	0	0	0	0	0	0
Manchester	81, 383	0	1	0	0	0	0	0	0
Vermont:									
Barre	¹ 10, 008	1	0	0	0	0	1	5	0
Burlington	23, 613	0	1	0	0	0	1	7	0
Massachusetts:									
Boston	770, 400	-----	54	25	3	1	220	-----	19
Fall River	120, 912	5	3	5	0	0	1	0	0
Springfield	144, 227	3	2	1	0	0	5	3	0
Worcester	191, 927	15	4	1	1	0	19	2	3
Rhode Island:									
Pawtucket	68, 799	3	1	1	0	0	0	0	0
Providence	242, 378	0	9	5	-----	0	4	0	2
Connecticut:									
Bridgeport	¹ 143, 555	7	5	8	0	0	6	0	1
Hartford	¹ 138, 036	0	6	6	0	0	8	7	3
New Haven	172, 967	8	4	0	1	0	86	0	1
MIDDLE ATLANTIC									
New York:									
Buffalo	536, 718	8	12	5	0	1	198	0	32
New York	5, 927, 625	351	251	323	16	18	305	55	174
Rochester	317, 867	1	6	4	-----	1	149	8	8
Syracuse	184, 511	19	6	2	-----	0	10	6	5
New Jersey:									
Camden	124, 157	2	3	6	-----	0	39	0	6
Newark	438, 699	64	13	11	0	0	108	3	15
Trenton	127, 390	2	4	2	0	1	2	0	2
Pennsylvania:									
Philadelphia	1, 922, 788	104	60	110	-----	1	322	19	52
Pittsburgh	613, 442	39	19	15	-----	0	304	12	36
Reading	110, 917	8	2	4	0	0	92	2	2
Scranton	140, 636	2	3	5	0	1	2	0	7
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	406, 312	5	7	9	0	0	1	8	8
Cleveland	888, 519	139	20	14	1	0	15	14	25
Columbus	261, 062	8	3	3	0	2	10	1	5
Toledo	268, 338	30	4	4	-----	0	123	0	5
Indiana:									
Fort Wayne	93, 573	4	2	0	0	0	15	0	0
Indianapolis	342, 718	50	6	1	-----	1	63	5	9
South Bend	76, 709	10	1	1	0	0	5	0	4
Terre Haute	68, 939	4	1	0	0	0	47	0	0
Illinois:									
Chicago	2, 886, 121	71	96	55	5	6	552	22	58
Cicero	55, 968	3	2	2	0	0	21	0	1
Springfield	61, 833	15	1	0	0	0	39	15	1

¹ Population Jan. 1, 1920.

City reports for week ended June 6, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued.									
Michigan:									
Detroit.....	995,668	119	44	34	5	5	33	8	30
Flint.....	117,968	5	4	0	0	0	29	0	4
Grand Rapids.....	145,947	4	2	0	0	0	162	0	1
Wisconsin:									
Madison.....	42,519	4	0	0	4	0	8	0	0
Milwaukee.....	484,595	36	12	12	0	0	154	56	7
Racine.....	64,393	10	1	3	0	0	50	15	1
Superior.....	139,671	1	1	0	0	0	1		0
WEST NORTH CENTRAL									
Minnesota:									
Duluth.....	106,280	3	1	0	0	0	1	0	1
Minneapolis.....	409,125	97	13	22	1	17	2	5	5
St. Paul.....	241,891	83	14	12	0	9	25	4	4
Iowa:									
Davenport.....	61,262	0	1	0	0	3	0		
Des Moines.....	140,923	0	1	2	0	0	0		
Sioux City.....	79,662	22	1	0	0	0	4		
Waterloo.....	39,667	6	0	0	0	0	5		
Missouri:									
Kansas City.....	351,819	10	6	4	1	3	12	6	6
St. Joseph.....	78,232	1	1	0	0	0	1	3	3
St. Louis.....	803,853	19	38	50	0	0	25	4	
North Dakota:									
Fargo.....	24,841	1	0	0	0	0	9	0	0
Grand Forks.....	14,547	7	0	0	0	0	0		
South Dakota:									
Sioux Falls.....	29,206	0	0	0	0	0	0	0	0
Nebraska:									
Lincoln.....	58,761	5	1	1	0	0	2	0	0
Omaha.....	204,382	11	3	1	0	0	0	6	6
Kansas:									
Topeka.....	52,555	10	1	0	1	0	22	1	1
Wichita.....	79,261	11	1	2	0	0	0	0	0
SOUTH ATLANTIC									
Delaware:									
Wilmington.....	117,728	4	1	4	0	0	27	1	2
Maryland:									
Baltimore.....	773,580	90	15	22	10	1	30	55	34
Cumberland.....	32,361	0	0	0	0	0	0	0	0
Frederick.....	11,301	0	0	1	0	0	0	0	0
District of Columbia:									
Washington.....	1,437,571	9	8	10	0	0	27		12
Virginia:									
Lynchburg.....	30,277	1	0	0	0	0	17	0	0
Norfolk.....	159,089	6	1	0	0	4	29	0	0
Richmond.....	181,044	7	1	0	0	2	6	3	3
Roanoke.....	55,502	1	1	0	0	0	32	0	1
West Virginia:									
Charleston.....	45,597		0						
Huntington.....	57,918	0	0	0	0	0	0		
Wheeling.....	156,208	1	1						
North Carolina:									
Raleigh.....	29,171	11	0	0	0	0	0	0	1
Wilmington.....	35,719		0						
Winston-Salem.....	56,230	8	0	1	0	0	5	7	1
South Carolina:									
Charleston.....	71,245	0	0	2	0	0	0	0	1
Columbia.....	39,688	1	1	0	0	0	2	0	0
Greenville.....	25,789	2	0	0	0	0	1	0	0
Georgia:									
Atlanta.....	222,963	16	1	4	15	0	4	14	14
Brunswick.....	15,937	6	0	0	0	0	0	6	6
Savannah.....	89,448	0	0	0	0	0	1	1	1
Florida:									
St. Petersburg.....	24,403	0	0	0	0	0	0	0	6
Tampa.....	56,050	0	1	0	0	0	1	0	0

¹ Population Jan. 1, 1920.

City reports for week ended June 6, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky:									
Covington.....	57,877	1	1	1	-----	0	0	0	2
Louisville.....	257,671	3	3	1	1	3	5	0	8
Tennessee:									
Memphis.....	170,067	12	2	0	-----	3	2	0	7
Nashville.....	121,128	1	0	0	-----	2	16	0	2
Alabama:									
Birmingham.....	195,901	2	1	0	1	1	0	1	2
Mobile.....	63,858	0	0	0	-----	0	0	1	1
Montgomery.....	45,383		0		-----				
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	30,635	6	0	0	-----	1		2	-----
Little Rock.....	70,916	2	0	1	0	0	1	1	1
Louisiana:									
New Orleans.....	404,575	2	6	4	3	1	0	0	5
Shreveport.....	54,590	0	0	-----	0	0	0	0	0
Oklahoma:									
Oklahoma.....	101,150	2	1	1	0	0	1	0	1
Texas:									
Dallas.....	177,274	14	3	1	0	0	2	0	3
Galveston.....	46,877	1	1	1	0	0	1	2	1
Houston.....	154,970	0	2	2	0	0	0	0	1
San Antonio.....	184,727	0	1	0	-----	0	0	0	2
MOUNTAIN									
Montana:									
Billings.....	16,927	0	1	0	0	1	0	8	1
Great Falls.....	27,787	1	1	0	0	0	2	3	0
Helena.....	12,637	0	0	0	0	0	0	0	0
Missoula.....	12,668	0	1	0	0	0	0	0	1
Idaho:									
Boise.....	22,806	1	0	1	0	0	0	0	0
Colorado:									
Denver.....	272,031	19	10	5	-----	2	2	18	6
Pueblo.....	43,519	0	2	0	0	0	0	2	1
New Mexico:									
Albuquerque.....	16,648	2	1	0	0	0	0	2	1
Arizona:									
Phoenix.....	33,899	0	0	0	0	0	0	0	2
Utah:									
Salt Lake City.....	126,241	55	2	2	0	0	0	31	1
Nevada:									
Reno.....	12,429	0	1	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	1 315,685	45	4	2	0	-----	4	56	-----
Spokane.....	104,573	6	2	11	0	-----	1	0	-----
Tacoma.....	101,731	2	1	1	0	0	0	2	1
California:									
Los Angeles.....	666,853	50	34	22	5	2	47	15	24
Sacramento.....	69,950	4	1	3	0	0	0	2	2
San Francisco.....	539,038	23	24	11	2	1	5	19	5

1 Population Jan. 1, 1920.

City reports for week ended June 6, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland.....	1	2	0	0	0	1	1	0	0	4	24
New Hampshire:											
Concord.....	0	0	0	0	0	0	0	0	0	0	9
Manchester.....	1	5	0	0	0	0	0	0	0	0	3
Vermont:											
Barre.....	1	1	0	0	0	2	0	0	0	0	4
Burlington.....	0	0	1	0	0	0	0	0	0	0	6
Massachusetts:											
Boston.....	41	64	0	0	0	14	2	4	0	232	
Fall River.....	2	5	0	0	0	3	0	0	0	0	22
Springfield.....	5	8	0	0	0	3	0	1	0	9	38
Worcester.....	6	0	0	0	0	2	1	0	0	6	50
Rhode Island:											
Pawtucket.....	1	2	0	0	0	1	0	0	0	1	
Providence.....	8	2	0	0	0	4	1	0	0	3	72
Connecticut:											
Bridgeport.....	5	13	0	0	0	3	0	0	0	2	33
Hartford.....	3	5	0	0	0	2	0	6	0	10	35
New Haven.....	3	5	0	0	0	0	1	1	0	31	70
MIDDLE ATLANTIC											
New York:											
Buffalo.....	18	25	0	0	0	7	0	3	0	15	173
New York.....	172	194	0	1	0	188	11	38	8	119	1,598
Rochester.....	10	36	0	0	0	4	0	3	0	8	65
Syracuse.....	9	2	0	0	0	1	0	0	0	7	36
New Jersey:											
Camden.....	2	15	0	0	0	2	0	2	0	5	33
Newark.....	16	20	1	0	0	8	0	3	0	62	141
Trenton.....	1	2	0	0	0	1	1	0	0	3	42
Pennsylvania:											
Philadelphia.....	63	127	0	6	0	41	5	1	1	46	504
Pittsburgh.....	20	87	0	0	0	7	2	1	0	15	218
Reading.....	2	11	0	0	0	2	0	0	0	3	38
Scranton.....	2	1	0	0	0	2	0	0	0	4	
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	8	15	2	1	0	11	0	1	0	3	136
Cleveland.....	17	30	1	1	0	29	1	3	0	79	271
Columbus.....	4	10	1	10	0	11	0	0	0	2	92
Toledo.....	12	7	2	0	0	3	0	0	0	20	67
Indiana:											
Fort Wayne.....	1	2	2	1	0	0	0	0	0	4	20
Indianapolis.....	11	9	7	10	0	12	0	0	0	21	120
South Bend.....	2	14	0	0	0	0	0	0	0	4	22
Terre Haute.....	1	6	1	8	1	2	0	0	0	1	14
Illinois:											
Chicago.....	64	172	2	5	3	45	3	3	1	99	724
Cicero.....	0	7	0	0	0	2	0	0	0	1	12
Springfield.....	1	5	1	0	0	3	1	0	0	0	26
Michigan:											
Detroit.....	59	98	11	2	0	18	3	5	0	110	332
Flint.....	4	10	1	0	0	0	0	0	0	8	20
Grand Rapids.....	5	28	1	3	0	1	0	1	0	12	39
Wisconsin:											
Madison.....	2	7	1	0	0	0	0	0	0	12	9
Milwaukee.....	22	12	3	40	8	9	1	0	0	33	113
Racine.....	4	2	0	6	0	0	0	0	0	2	9
Superior.....	1	0	2	0	0	0	0	0	0	0	2

¹ Pulmonary tuberculosis only.

City reports for week ended June 6, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith.....	0	1	0	0	0	1	0	1	6		
Little Rock.....	0	0	0	0	0	1	3	1	1		
Louisiana:											
New Orleans.....	2	13	3	2	0	13	3	6	1	23	156
Shreveport.....		0	0	2	0	0	0	1	0	0	34
Oklahoma:											
Oklahoma.....	1	2	5	0	0	1	0	5	0	1	21
Texas:											
Dallas.....	1	2	2	2	0	1	1	3	1	14	47
Galveston.....	0	0	0	1	0	2	1	1	0	0	13
Houston.....	0	3	1	0	0	2	1	4	0	0	40
San Antonio.....	1	0	0	0	0	6	0	1	0	0	54
MOUNTAIN											
Montana:											
Billings.....	1	3	1	0	0	0	0	0	0	1	9
Great Falls.....	1	10	1	3	0	0	0	0	0	4	9
Helena.....	0	2	0	1	0	0	0	0	0	0	7
Missoula.....	0	0	0	0	0	0	0	0	0	7	4
Idaho:											
Boise.....	1	0	1	0	0	0	0	0	0	1	2
Colorado:											
Denver.....	9	5	1	0	0	17	0	1	0	15	80
Pueblo.....	1	1	0	0	0	1	0	0	0	0	14
New Mexico:											
Albuquerque.....	1	0	0	0	0	1	0	0	0	0	9
Arizona:											
Phoenix.....		2		0	0	6		0	0	0	14
Utah:											
Salt Lake City.....	2	14	1	0	0	0	6	7	0	6	22
Nevada:											
Reno.....	0	0	0	0	0	0	0	0	0	1	0
PACIFIC											
Washington:											
Seattle.....	7	10	2	20			1	0		111	
Spokane.....	4	3	4	1			0	2		29	
Tacoma.....	2	1	2	4	0	1	0	0	0	15	27
California:											
Los Angeles.....	10	22	1	36	0	26	2	0	0	51	269
Sacramento.....	1	0	1	3	0	2	0	0	0	6	31
San Francisco.....	13	16	1	2	0	7	1	1	0	34	152

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)			Typhus fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths	Cases	Deaths
NEW ENGLAND											
New Hampshire:											
Concord.....	0	0	0	0	0	0	0	1	0		
Massachusetts:											
Boston.....	1	0	0	0	0	0	0	0	0		
Springfield.....	0	0	0	0	0	1	0	0	0		
Connecticut:											
Bridgeport.....	0	0	1	1	0	0	0	0	0		

City reports for week ended June 6, 1925—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		Typhus fever		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths	Cases	Deaths
MIDDLE ATLANTIC											
New York:											
Buffalo.....	0	0	0	0	0	0	0	0	1		
New York.....	3	1	11	6	0	0	2	1	3		
New Jersey:											
Newark.....	4	2	0	0	0	0	0	3	0		
Pennsylvania:											
Philadelphia.....	0	0	2	1	0	0	0	0	0		
EAST NORTH CENTRAL											
Ohio:											
Cleveland.....	1	1	0	0	0	0	0	0	0		
Columbus.....	1	0	0	0	0	0	0	0	0		
Illinois:											
Chicago.....	3	2	1	1	0	0	0	0	0		
Michigan:											
Detroit.....	5	0	0	0	0	0	0	0	0		
Wisconsin:											
Milwaukee.....	0	0	1	0	0	0	0	0	0		
WEST NORTH CENTRAL											
Missouri:											
Kansas City.....	0	0	1	1	0	0	0	0	0		
St. Louis.....	1	0	0	0	0	0	0	0	0		
SOUTH ATLANTIC											
Maryland:											
Baltimore.....	1	1	0	0	0	0	1	0	0		
Georgia:											
Atlanta.....	0	0	0	0	1	1	0	0	0		
EAST SOUTH CENTRAL											
Alabama:											
Birmingham.....	0	0	0	0	0	0	0	1	0		
WEST SOUTH CENTRAL											
Arkansas:											
Little Rock.....	0	0	0	0	1	1	0	0	0		
Louisiana:											
New Orleans.....	1	1	0	0	1	0	0	0	0		
Shreveport.....	0	0	0	0	0	4	0	0	0		
Oklahoma:											
Oklahoma.....	0	0	0	1	1	0	0	0	0		
Texas:											
Dallas.....	0	0	0	0	0	1	0	0	0		
Houston.....	0	0	0	0	0	1	0	0	0		
San Antonio.....	1	0	0	0	0	0	0	0	0		
MOUNTAIN											
Montana:											
Helena.....	0	1	0	0	0	0	0	0	0		
Arizona:											
Phoenix.....	0	0	0	0	0	0		1	0		
PACIFIC											
Washington:											
Tacoma.....	1	3	0	0	0	0	0	0	0		
California:											
Los Angeles.....	0	0	1	0	0	0	0	4	0		
San Francisco.....	0	1	0	1	0	0	0	4	2		

The following table gives the rates per hundred thousand population for 105 cities for the 10-week period ended June 6, 1925. The population figures used in computing the rates were estimated as of July 1, 1923, as this is the latest date for which estimates are available. The 105 cities reporting cases had an estimated aggregate population of nearly 29,000,000, and the 97 cities reporting deaths had more than 28,000,000 population. The number of cities included in each group and the aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, March 29 to June 6, 1925—Annual rates per 100,000 population ¹

DIPHTHERIA CASE RATES

	Week ended—									
	Apr. 4	Apr. 11	Apr. 18	Apr. 25	May 2	May 9	May 16	May 23	May 30	June 6
105 cities.....	177	158	160	162	158	² 157	³ 164	153	⁴ 151	⁵ 158
New England.....	171	166	129	144	127	109	154	127	114	129
Middle Atlantic.....	241	220	228	218	213	212	238	203	211	244
East North Central.....	93	96	110	113	110	113	110	108	106	99
West North Central.....	220	226	188	187	201	278	211	251	197	189
South Atlantic.....	81	73	102	108	104	104	85	87	⁶ 77	⁷ 94
East South Central.....	23	34	46	40	40	11	34	40	⁸ 12	⁹ 12
West South Central.....	83	107	74	79	70	65	56	42	65	42
Mountain.....	124	105	239	267	115	105	153	134	143	76
Pacific.....	374	171	168	165	206	² 123	³ 138	165	168	145

MEASLES CASE RATES

105 cities.....	558	531	589	645	581	² 627	³ 624	601	⁴ 597	⁵ 613
New England.....	957	1,011	917	1,217	1,004	984	1,188	1,051	867	872
Middle Atlantic.....	734	680	815	782	734	797	768	617	704	774
East North Central.....	736	710	742	901	761	890	854	954	913	893
West North Central.....	77	58	91	102	79	112	79	236	145	114
South Atlantic.....	209	207	256	295	305	240	329	327	⁶ 256	⁷ 311
East South Central.....	69	34	97	189	200	343	166	337	⁸ 229	⁹ 138
West South Central.....	88	51	65	37	28	32	14	23	14	23
Mountain.....	219	57	267	219	534	181	57	181	248	38
Pacific.....	309	241	154	203	162	² 95	³ 178	131	165	165

SCARLET FEVER CASE RATES

105 cities.....	409	367	342	360	309	² 323	³ 352	307	⁴ 281	⁵ 268
New England.....	534	529	350	407	430	415	358	350	211	266
Middle Atlantic.....	436	359	343	336	323	319	331	265	271	263
East North Central.....	442	422	403	433	324	366	399	413	346	317
West North Central.....	736	647	651	692	518	618	728	556	531	481
South Atlantic.....	175	152	167	175	132	106	165	146	⁶ 122	⁷ 133
East South Central.....	263	280	229	257	263	263	326	246	⁸ 193	⁹ 132
West South Central.....	51	68	60	121	111	88	74	23	65	88
Mountain.....	277	258	315	401	334	277	353	324	410	334
Pacific.....	191	174	145	148	125	² 151	³ 197	162	139	151

¹ The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1923.

² Spokane, Wash., not included. Report not received at time of going to press.

³ Tacoma, Wash., not included.

⁴ Charleston, W. Va., and Montgomery, Ala., not included.

⁵ Charleston, W. Va., Wheeling, W. Va., Wilmington, N. C., and Montgomery, Ala., not included.

⁶ Charleston, W. Va., not included.

⁷ Charleston, W. Va., Wheeling, W. Va., and Wilmington, N. C., not included.

⁸ Montgomery, Ala., not included.

Summary of weekly reports from cities, March 29 to June 6, 1925—Annual rates per 100,000 population—Continued

SMALLPOX CASE RATES

	Week ended—									
	Apr. 4	Apr. 11	Apr. 18	Apr. 25	May 2	May 9	May 16	May 23	May 30	June 6
105 cities.....	57	51	48	62	50	² 46	³ 46	60	⁴ 46	⁵ 46
New England.....	12	2	0	2	0	2	0	0	0	0
Middle Atlantic.....	21	10	18	12	8	6	7	2	2	4
East North Central.....	24	22	27	39	30	44	56	70	58	65
West North Central.....	87	97	85	89	75	60	79	68	70	95
South Atlantic.....	49	43	53	79	63	45	37	65	⁶ 10	⁷ 41
East South Central.....	42	572	395	457	435	377	189	440	⁸ 439	⁸ 120
West South Central.....	46	51	14	42	32	28	37	130	56	32
Mountain.....	19	19	10	29	10	48	29	29	57	38
Pacific.....	255	148	162	264	206	¹ 176	³ 191	186	168	191

TYPHOID FEVER CASE RATES

105 cities.....	9	10	12	16	18	² 14	³ 13	19	⁴ 16	⁵ 25
New England.....	5	2	7	17	10	5	12	25	17	30
Middle Atlantic.....	4	9	11	14	22	13	10	19	9	26
East North Central.....	4	6	4	7	4	9	6	5	7	10
West North Central.....	2	2	2	6	12	2	0	4	10	8
South Atlantic.....	30	20	12	14	28	28	26	39	⁶ 41	⁷ 41
East South Central.....	17	17	34	80	46	46	63	74	⁸ 48	⁸ 42
West South Central.....	32	37	56	51	51	46	79	65	74	88
Mountain.....	0	19	38	29	0	0	0	19	10	76
Pacific.....	20	9	12	23	17	⁹ 9	³ 3	6	9	9

INFLUENZA DEATH RATES

105 cities.....	34	27	27	30	22	15	14	14	⁴ 13	⁵ 11
New England.....	35	32	27	30	20	10	7	5	7	2
Middle Atlantic.....	21	16	24	17	14	10	12	11	9	11
East North Central.....	38	27	24	33	23	16	11	12	14	10
West North Central.....	39	37	50	48	31	11.	11	18	18	4
South Atlantic.....	28	26	12	43	26	24	10	6	⁶ 12	⁷ 6
East South Central.....	69	74	80	86	51	51	80	86	⁸ 42	⁸ 54
West South Central.....	36	46	36	25	31	15	20	24	31	5
Mountain.....	181	86	38	76	48	19	57	19	0	29
Pacific.....	29	12	29	12	12	16	12	25	8	12

PNEUMONIA DEATH RATES

105 cities.....	204	201	192	203	167	151	127	128	⁴ 126	⁵ 128
New England.....	251	211	206	186	149	161	134	119	114	72
Middle Atlantic.....	215	190	204	223	206	185	143	144	146	168
East North Central.....	182	190	190	211	148	130	125	125	119	114
West North Central.....	193	228	171	136	72	77	58	79	59	57
South Atlantic.....	234	238	232	191	195	156	136	134	⁶ 157	⁷ 150
East South Atlantic.....	269	343	206	286	194	160	166	137	⁸ 181	⁸ 132
West South Central.....	168	168	173	158	127	138	112	84	76	66
Mountain.....	162	267	210	219	124	124	162	172	76	95
Pacific.....	159	119	98	147	127	123	78	135	82	131

² Spokane, Wash., not included. Report not received at time of going to press.³ Tacoma, Wash., not included.⁴ Charleston, W. Va., and Montgomery, Ala., not included.⁵ Charleston, W. Va., Wheeling, W. Va., Wilmington, N. C., and Montgomery, Ala., not included.⁶ Charleston, W. Va., not included.⁷ Charleston, W. Va., Wheeling, W. Va., and Wilmington, N. C., not included.⁸ Montgomery, Ala., not included.

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases	Aggregate population of cities reporting deaths
Total	105	97	28, 898, 350	28, 140, 934
New England	12	12	2, 098, 746	2, 098, 746
Middle Atlantic	10	10	10, 304, 114	10, 304, 114
East North Central	17	17	7, 032, 535	7, 032, 535
West North Central	14	11	2, 515, 330	2, 381, 454
South Atlantic	22	22	2, 566, 901	2, 566, 901
East South Central	7	7	911, 885	911, 885
West South Central	8	6	1, 124, 564	1, 023, 013
Mountain	9	9	546, 445	546, 445
Pacific	6	3	1, 797, 830	1, 275, 841

FOREIGN AND INSULAR

THE FAR EAST

Wireless health news messages.—The following data for the week ended May 30, 1925, were sent by wireless from the Far Eastern Bureau of the health section of the League of Nations located at Singapore, to the headquarters at Geneva, Switzerland:

Port	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Calcutta.....	0	0	.....	38	54	45
Bombay.....		8	0	0	19	15
Madras ¹						
Rangoon.....		4		2	28	15
Karachi.....	0	0	0	0	1	0
Nagapatam.....	0	0	0	0	0	0
Singapore.....	1	1	0	0	0	0
Port Swettenham.....	0	0	0	0	0	0
Penang.....	0	0	0	0	0	0
Batavia.....	0	0	0	0	0	1
Soerabaya.....	0	0	0	0	1	1
Samarang.....	0	0	0	0	0	0
Belawan Deli.....	0	0	0	0	0	0
Macassar.....	0	0	0	0	0	0
Sandakan (North Borneo).....	0	0	0	0	0	0
Bangkok ²	1	.....	2	1	2	1
Saigon and Cholon.....		1		1	0	0
Hongkong.....	0	0	0	0	2	2
Shanghai.....	0	0	0	0	0	0
Manila.....	0	0	0	0	0	0
Colombo.....	1	1	0	0	0	0
Nagasaki.....	0	0	0	0	2	.....
Yokohama.....	0	0	0	0	1	.....
Shimonoseki.....	0	0	0	0	0	0
Kobe.....	0	0	0	0	0	0
Adelaide.....	0	0	0	0	0	0
Fremantle.....	0	0	0	0	0	0
Melbourne.....	0	0	0	0	0	0
Sydney.....	0	0	0	0	0	0

¹ Report not received for week ended May 30, 1925.

² Infected rats captured.

CHINA

Cerebrospinal meningitis—Hongkong—December 28, 1924—April 25, 1925.—During the period December 28, 1924, to April 25, 1925, 42 cases of cerebrospinal meningitis with 33 deaths were reported at Hongkong, China.

EGYPT

Plague—May 14–20, 1925—Summary and comparison, years 1924 and 1925.—During the week ended May 20, 1925, four cases of plague were reported in Egypt, making a total from January 1 to May 20, 1925, of 44 cases, as compared with 238 cases notified during the corresponding period of the year 1924.

JAVA

Mortality, 1923-24 (comparative)—Dysentery—Typhoid fever—Spread of plague—Batavia district.—Information dated March 25, 1925, shows that general health conditions in Batavia district during the year 1924 were good but that the rate of infant mortality was high. The rate of general mortality was stated as follows: European, 9.4 per 1,000 (year 1923, 9.6); native, 36.7 (year 1923, 38.8); Chinese, 40.3 (year 1923, 39.7); Arab, 36.7 (year 1923, 38.9). No epidemic prevalence was reported, but the fatality from dysentery and typhoid fever was stated to have been high. The deaths from typhoid fever were, however, 30 per cent less than in 1923. Of deaths among natives, 50 per cent were reported among children under 1 year of age.

The spread of plague in Java was stated to have been constant throughout the year, 13,345 deaths having been reported, as compared with 8,774 deaths in 1923. In the Provinces of Banjoemas, Cheribon, Kedoe, Pekalongan, Samarang, and Soerakarta the prevalence approached epidemic form. The course of the spread was stated to be apparently westward. Unofficial reports show the presence of plague at Batavia.

MAURITIUS

Plague—January–February, 1925.—During the two-month period ended February 28, 1925, 47 cases of plague with 41 deaths were reported in the island of Mauritius. Of these, 35 cases with 32 deaths occurred during the month of January and 12 cases with 9 deaths in February. For distribution of occurrence according to locality, see page 1401.

NIGERIA

Yellow fever—Lagos—June 6, 1925.—Under date of June 6, 1925, yellow fever was reported present at Lagos, Nigeria.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended June 26, 1925¹

CHOLERA

Place	Date	Cases	Deaths	Remarks
India.....				
Rangoon.....	Apr. 26–May 2.....	6	4	Apr. 19–25, 1925: Cases, 5,165; deaths, 3,178.
Siam:				
Bangkok.....	Apr. 19–25.....	2		

¹ From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended June 26, 1925—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Ceylon:				
Colombo.....				May 3-9, 1925: One plague rodent found.
Egypt.....				May 14-20, 1925: Cases, 4. Jan. 1-May, 20, 1925: Cases, 44; corresponding period, 1924—cases, 238.
India.....				Apr. 19-25, 1925: Cases, 4, 290; deaths, 3,828.
Rangoon.....	Apr. 26-May 2	38	33	
Java:				
East Java—				
Soerabaya.....	Apr. 9-15	1	1	
West Java—				
Batavia.....	Apr. 25-May 1	9	9	Province.
Mauritius.....				Jan.-Feb., 1925: Cases, 47; death, 41.
Towns—				
Flacq.....	Jan. 1-31	1	1	
Moka.....	do	1	1	
Pamplemousses.....	Jan. 1-31	2		
Do.....	Feb. 1-28	8	6	
Plaines Wilhems.....	Jan. 1-31	1	1	
Do.....	Feb. 1-28	2	1	
Port Louis.....	Jan. 1-31	30	29	
Do.....	Feb. 1-28	2	2	

SMALLPOX

Arabia:				
Aden.....	May 17-23	1	1	
Brazil:				
Porto Alegre.....	Apr. 19-25		1	
Sao Paulo.....				Aug. 25-Oct. 5, 1924: Cases, 30; deaths, 36.
British South Africa:				
Northern Rhodesia.....	Apr. 13-20	1	1	Native.
Canada:				
British Columbia—				
Vancouver.....	May 25-31	4		
New Brunswick—				
Fredericton.....	May 24-30	1		
Ontario—				
Kingston.....	May 24-June 6	5		
China:				
Amoy.....	May 3-9		3	
Canton.....	Apr. 26-May 9			Present.
Chungking.....	May 10-16			Prevalent.
Manchuria—				
Harbin.....	May 5-12	2		
Great Britain:				
England and Wales.....	May 10-23	293		
London.....	May 10-16	2		
Newcastle-on-Tyne.....	May 24-30	2		
India.....				Apr. 19-25, 1925: Cases, 6,692; deaths, 1,642.
Karachi.....	May 10-16	1		
Madras.....	May 10-16	26	15	
Rangoon.....	Apr. 26-May 2	50	21	
Japan:				
Nagasaki.....	May 11-24	9	3	
Java:				
East Java—				
Soerabaya.....	Apr. 9-15	44	9	
West Java—				
Batavia.....	Apr. 25-May 1	1		
Mexico:				
Mexico City.....	May 17-23	1		Including municipalities in Federal District.
Tampico.....	May 21-31	2		
Portugal:				
Oporto.....	May 24-30		1	
Siam:				
Bangkok.....	Apr. 19-25	5		
Switzerland:				
Berne.....	May 3-9	1		
Lucerne.....	Apr. 1-30	23		
Turkey:				
Constantinople.....	May 1-15	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended June 26, 1925—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Brazil: Porto Alegre.....	Apr. 26-May 2.....		2	
Mexico: Mexico City.....	May 17-23.....	6		Including municipalities in Federal District.
Palestine: Bir-tuvia.....	May 12-18.....	2		
Turkey: Constantinople.....	May 1-15.....	4		

YELLOW FEVER

Nigeria: Lagos.....	June 6.....			Present.
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Reports Received from December 27, 1924, to June 26, 1925¹

CHOLERA

Place	Date	Cases	Deaths	Remarks	
Ceylon.....				June 29-Dec. 27, 1924: Cases, 14; deaths, 13. Dec. 28, 1924-Jan. 24, 1925: Cases, 24; deaths, 17.	
Colombo.....	Nov. 16-22.....	1			
Do.....	Jan. 11-24.....	2	2	Oct. 19, 1924-Jan. 3, 1925: Cases, 27, 164; deaths, 16, 228. Jan. 4-Apr. 25, 1925: Cases, 42, 239, deaths, 25, 258.	
India.....					
Bombay.....	Nov. 23-Dec. 20.....	4	4		
Do.....	Jan. 18-24.....	1	1		
Calcutta.....	Oct. 26-Jan. 3.....	59	51		
Do.....	Jan. 4-May 2.....	509	448		
Madras.....	Nov. 16-Jan. 3.....	69	40		
Do.....	Jan. 4-May 9.....	145	102		
Rangoon.....	Nov. 9-Dec. 20.....	9	2		
Do.....	Jan. 4-Apr. 25.....	26	18		
Do.....	Apr. 26-May 2.....	6	4		
Indo-China.....					Aug. 1-Sept. 30, 1924: Cases, 14; deaths, 10. Dec. 1-31, 1924: Cases, 5; deaths, 2.
Province—					
Anam.....	Aug. 1-31.....	1	1		
Cambodia.....	Aug. 1-Sept. 30.....	6	5		
Do.....	Dec. 1-31.....	1	1		
Cochin-China.....	Aug. 1-Dec. 31.....	10	5		
Saigon.....	Nov. 30-Dec. 6.....	1	1		
Do.....	Mar. 15-21.....	1	1		
Tonkin.....	Dec. 1-31.....	1	1		
Siam:					
Bangkok.....	Nov. 9-29.....	4	2		
Do.....	Jan. 18-Apr. 25.....	17	10		

PLAGUE

Azores:				
Fayal Island—				Present with several cases.
Castelo Branco.....	Nov. 25.....			
Feteira.....	do.....	1		
St. Michael Island.....	Nov. 2-Jan. 3.....	30	13	
Do.....	Jan. 18-24.....	3	1	
Brazil:				Bubonic.
Bahia.....	Jan. 4-May 2.....	13	9	
Santos.....	Year, 1924.....	2		
British East Africa:				
Tanganyika Territory.....	Nov. 23-Dec. 27.....	17	10	
Do.....	Jan. 18-Mar. 14.....	18	12	
Uganda.....	Aug.-Dec., 1924.....	279	243	
Do.....	Jan. 1-31.....	29	28	
Canary Islands:				
Las Palmas.....	Jan. 21-23.....	2		Stated to be endemic. Stated to have been infected with plague Sept. 30, 1924.
Do.....	Feb. 4.....	1		
Do.....	Mar. 26.....	1	1	
Realejo Alto.....	Dec. 19.....	3	1	Vicinity of Santa Cruz de Tenerife.
Teneriffe—				
Santa Cruz.....	Jan. 3.....	1		In vicinity.

¹ From medical officers of the Public Health Service, American consuls, and other sources.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW
FEVER—Continued**

Reports Received from December 27, 1924, to June 26, 1925—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Celebes:				
Macassar	Oct. 29			Epidemic.
Ceylon:				
Colombo	Nov. 9-Jan. 3	12	9	
Do	Jan. 4-May 9	22	23	One plague rodent found.
China:				
Foochow	Dec. 28-Jan. 3			Present.
Nanking	Nov. 23-Mar. 7			Do.
Shing Hsien	October, 1924		790	
Ecuador:				
Chimborazo Province—				Mar. 16-Apr. 15, 1925: Cases, 10,
Alausi District	Jan. 14		14	deaths, 4.
Daule	Mar. 16-31	1		At 2 localities on Guayaquil
Guayaquil	Nov. 16-Dec. 31	9	3	& Quito Ry.
Do	Jan. 1-May 15	72	33	Rats taken, 27,004; found in-
				fectcd, 92.
				Rats taken, 99,017; found in-
				fectcd, 395.
Naranjito	Feb. 16-Mar. 15	1		
Yaguachi	Feb. 1-Mar. 15	2	1	
Egypt:				
City—				Year 1924: Cases, 373. Jan. 1-
Suez	Apr. 2-May 13	3	2	May 20, 1925: Cases, 44.
Province—				
Assiout	May 2	1	1	
Beni-Souef	Jan. 18	1	1	
Do	May 7-13	10		
Dakhalia	Jan. 7	1	1	
Fayoum	Apr. 5-May 13	5	3	
Girgeh	Jan. 9-Apr. 5	2	2	
Kalioubiah	Jan. 5-Apr. 22	5	2	
Menoufieh	Jan. 1-Apr. 9	8	4	
Minia	Apr. 1-May 5	4	2	
Gold Coast:				
Mintia				September - December, 1924;
				deaths, 52.
Greece:				
Patras	Apr. 5	1		
Hawaii:				
Honokaa	Nov. 4	1		Plague-infected rodents found
				Dec. 9, 1924, Jan. 15, Apr. 28
				and 30, 1925. Vicinity Pacific
				Sugar Mill, Island of Hawaii.
India:				Oct. 19, 1924, to Jan. 3, 1925:
				Cases, 28,154; deaths, 21,505.
				Jan. 4-Apr. 4, 1925: Cases,
				65,576; deaths, 58,027.
				Apr. 12-25, 1925: Cases, 9,700;
				deaths, 8,477.
Do:				
Bombay	Nov. 22-Jan. 3	4	3	
Do	Jan. 4-Apr. 25	91	85	
Calcutta	Jan. 18-24	1	1	
Karachi	Nov. 30-Dec. 6	2	1	
Do	Jan. 4-Feb. 21	12	11	
Do	Mar. 29-Apr. 25	6	7	
Do	May 3-9	5	3	
Madras Presidency	Nov. 23-Jan. 3	685	487	
Do	Jan. 4-24	658	511	
Do	Mar. 8-14	80	48	
Do	Apr. 5-25	70	42	
Rangoon	Oct. 26-Jan. 3	26	25	
Do	Jan. 4-May 2	283	248	
Indo-China:				
Province—				Aug. 1-Sept. 30, 1924: Cases, 25;
Anam	Aug. 1-Sept. 30	4	4	deaths, 20. Dec. 1-31, 1924:
Do	Dec. 1-31	5	5	Cases, 11; deaths, 11. Corre-
Cambodia	Aug. 1-Sept. 30	18	15	sponding month, 1923: Cases,
Do	Dec. 1-31	6	6	15; deaths, 5.
Cochin-China	do	3	1	
Saigon	Dec. 25-31	1	1	Including 100 square kilometers
				of surrounding territory.
Do	Jan. 11-17	2	1	Do.
Iraq:				
Bagdad	June 29-Jan. 3	20	14	
	Mar. 22-28	1	1	
Japan:				
.....	Aug. 10-Dec. 6	19		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Java:				
East Java—				
Blitar.....	Nov. 11-22.....			Province of Kediri. Epidemic.
Pare.....	Nov. 29.....			Do.
Samarang.....	Mar. 22-28.....	2	2	
Sidoarjo.....	Jan. 2.....			Declared epidemic, Province of
Soerabaya.....	Nov. 16-Dec. 31.....	71	72	Soerabaya.
Do.....	Jan. 15-Apr. 15.....	30	28	Mar. 29-Apr. 4, 1925: 2 plague rats found.
Soerakarta.....	Feb. 20.....			Epidemic plague in one locality.
West Java—				
Batavia.....	Apr. 11-May 1.....	35	35	Province.
Cheribon.....	Oct. 14-Nov. 3.....		14	
Do.....	Nov. 18-Dec. 22.....		80	
Do.....	Jan. 1-14.....		44	
Do.....	Feb. 5-11.....		13	
Do.....	Feb. 19-25.....		13	
Do.....	Mar. 5-25.....		36	
Paseroean.....	Dec. 27.....			Province. Epidemic in one locality.
Pekalongan.....	Oct. 14-Nov. 3.....		29	
Do.....	Nov. 18-Dec. 31.....		177	Pekalongan Province.
Do.....	Jan. 1-14.....		81	
Do.....	Feb. 5-11.....		36	
Do.....	Feb. 19-25.....		38	
Do.....	Mar. 5-25.....		66	
Probalingga.....	Dec. 27.....			Province. Epidemic.
Tegal.....	Oct. 14-Dec. 31.....		26	
Do.....	Jan. 1-14.....		37	Pekalongan Province.
Do.....	Feb. 5-11.....		7	
Do.....	Feb. 19-25.....		10	
Do.....	Mar. 5-25.....		11	
Madagascar:				
Fort-Dauphin (port).....	Nov. 1-Dec. 15.....	12	5	
Do.....	Feb. 1-15.....	1	1	Bubonic.
Itasy Province.....	Nov. 1-Dec. 15.....	4	2	
Do.....	Feb. 1-Mar. 15.....	6	6	
Majunga (port).....	Nov. 1-30.....	1	1	
Moramanga Province.....				Nov. 1-Dec. 15, 1924: Cases, 49; deaths, 34. Jan. 16-Mar. 15, 1925: Cases, 8; deaths, 8.
Tamatave (port).....	Nov. 1-30.....	1	1	
Tananarive Province.....				Oct. 16-Dec. 31, 1924: Cases, 298; deaths, 274.
Do.....				Jan. 1-Mar. 31: Cases, 550; deaths, 468.
Tananarive (town).....	Mar. 1-31.....	6	3	
Mauritius Island.....				Year 1924: Cases, 161; deaths, 144.
Do.....				Jan.-Feb., 1925: Cases, 47; deaths, 41.
District—				
Flacq.....	Dec. 1-31.....	5	4	
Do.....	Jan. 1-31.....	1	1	
Moka.....	do.....	1	1	
Pamplemousses.....	Dec. 1-31.....	1	1	
Do.....	Jan. 1-Feb. 28.....	10	6	
Plaines Wilhems.....	January - December, 1924.....	54	47	Not present March, April, May.
Do.....	Jan. 1-Feb. 28.....	3	2	
Port Louis.....	February-December, 1924.....	101	92	
Do.....	Jan. 1-Feb. 28.....	32	31	
Mexico:				
Tampico.....	Apr. 6, 1925.....			Plague rat found in vicinity of Government wharves.
Morocco:				
Marrakech.....				Feb. 9, 1925: Present in native quarter of town. Stated to be pneumonic in form and of high mortality.
Nigeria.....				August-November, 1924: Cases, 387; deaths, 317.
Palestine:				
Jerusalem.....	Mar. 3-9.....	1		
Peru:				
Callao.....	February, 1925.....	6	6	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Siam:				
Bangkok.....	Dec. 28-Jan. 3.....	1	1	
Do.....	Jan. 25-Apr. 18.....	15	14	
Siberia:				
Transbaikalia—				
Turga.....	October, 1924.....		3	On Chita Railroad.
Straits Settlements:				
Singapore.....	Nov. 9-15.....	1	1	
Do.....	Jan. 4-Apr. 25.....	39	30	
Syria:				
Beirut.....	Jan. 11-Apr. 10.....	2		
Turkey:				
Constantinople.....	Jan. 9-15.....	5	5	
Union of South Africa.....	Nov. 22-Jan. 3.....	28	15	In Cape Province, Orange Free State, and Transvaal.
Do.....	Jan. 4-Apr. 4.....	55	23	Do.
On vessels:				
S. S. Conde.....				At Marseille, France, Nov. 8, 1924. Plague rat found. Vessel left for Tamatave, Madagascar, Nov. 12, 1924.
Steamship.....	November, 1924.....	1	1	At Majunga, Madagascar, from Djibuti, Red Sea port.

SMALLPOX

Algeria.....				July 1-Dec. 31, 1924: Cases, 400.
Algiers.....	Jan. 1-Apr. 30.....	16		Jan. 1-20, 1925: Cases, 107.
Arabia:				
Aden.....	Jan. 25-May 23.....	15	2	
Argentina:				
Buenos Aires.....	Mar. 15-21.....	1		
Belgium.....	Jan. 1-Feb. 10.....	4		
Bolivia:				
La Paz.....	Nov. 1-Dec. 21.....	20	11	
Do.....	Jan. 1-Mar. 31.....		12	
Brazil:				
Pernambuco.....	Nov. 9-Jan. 3.....	100	27	
Do.....	Jan. 4-Apr. 18.....	132	69	
Porto Alegre.....	Apr. 12-25.....		2	
San Paulo.....				Aug. 25-Oct. 5, 1924: Cases, 30; deaths, 35.
British East Africa:				
Kenya—				
Mombasa.....	Jan. 18-Feb. 28.....	66	14	
Do.....	Mar. 8-Apr. 18.....	42	11	
Tanganyika Territory.....	Feb. 15-Mar. 23.....	17	2	
Zanzibar.....	Mar. 1-31.....	1		
Uganda—				
Entebbe.....	Oct. 1-31.....	4		
British South Africa:				
Northern Rhodesia.....	Oct. 28-Dec. 15.....	57	2	
Do.....	Jan. 27-Apr. 20.....	13		Natives.
Southern Rhodesia.....	Jan. 29-Mar. 25.....	4	1	
Bulgaria:				
Sofia.....	Mar. 12-18.....	1		Varioloid.
Canada:				
Alberta—				
Calgary.....	Mar. 15-21.....	1		
British Columbia—				
Ocean Falls.....	Mar. 7-27.....	6		Very mild.
Vancouver.....	Dec. 14-Jan. 3.....	32		
Do.....	Jan. 4-Apr. 12.....	305		
Do.....	Apr. 19-May 31.....	21		
Victoria.....	Jan. 18-May 30.....	12		
Manitoba—				
Winnipeg.....	Dec. 7-Jan. 3.....	14		
Do.....	Jan. 4-Apr. 11.....	31		
New Brunswick—				
Northumberland.....	Feb. 8-14.....	1		County.
Fredericton.....	May 24-30.....	1		
Victoria.....	do.....	1		Do.
Ontario.....				Nov. 30-Dec. 27, 1924: Cases, 33; Dec. 23, 1924, to May 30, 1925: Cases, 85; deaths, 2.
Hamilton.....	Jan. 24-30.....	1		
Kingston.....	Apr. 12-June 6.....	6		
Ottawa.....	Mar. 29-May 9.....	3		
Welland.....	Mar. 22-Apr. 25.....	7		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Ceylon				July 27–Nov. 29, 1924: Cases, 27; deaths, 1.
Colombo	Jan. 18–Feb. 7	4		
Do	Mar. 8–Apr. 25	17	1	
China:				
Amoy	Nov. 9–Feb. 21			Present.
Do	Feb. 22–May 9		32	Prevalent in surrounding district.
Antung	Nov. 17–Dec. 28	5		
Do	Jan. 5–Feb. 14	15	1	
Do	Mar. 2–Apr. 5	9	1	
Do	Apr. 12–May 10	6		
Canton	Mar. 15–May 9			Prevalent.
Chefoo	Mar. 15–21			Prevalent. No foreign cases.
Chungking	Mar. 22–May 16			Stated to be widely prevalent.
Foochow	Nov. 2–May 2			Present.
Hongkong	Nov. 9–Jan. 3	6	2	
Do	Jan. 4–Apr. 18	50	33	
Manchuria—				
Dairen	Jan. 19–Apr. 12	29	5	
Harbin	Jan. 15–May 12	14		
Nanking	Jan. 4–May 9			Prevalent.
Shanghai	Dec. 7–27	1	2	
Do	Jan. 18–Apr. 25		9	
Do	Apr. 12–25	2	1	
Chosen:				
Seoul	Dec. 1–31	1		
Do	Mar. 1–Apr. 30	3		
Colombia:				
Buenaventura	Feb. 15–Apr. 4	3		
Santa Marta	Mar. 15–28			Present in mild form in localities in vicinity.
Cuba:				
Santiago	Apr. 12–18	3	1	
Czechoslovakia				April–June, 1924: Cases, 1; occurring in Province of Moravia.
Dominican Republic:				
Puerta Plata	Mar. 8–21	3		
Dutch Guiana:				
Paramaribo	Apr. 20	1		
Ecuador:				
Guayaquil	Nov. 16–Dec. 15	4		
Egypt:				
Alexandria	Nov. 12–Dec. 31	10		
Do	Jan. 8–Apr. 29	10		
Cairo	Jan. 29–Feb. 4	1	1	
Estonia				Dec. 1–31, 1924; Cases, 2.
France				July–December, 1924: Cases, 81.
Do	January, 1925	10		
Boulogne-Sur-Mer	Apr. 1–30	1	1	
Dunkirk	Mar. 2–8	1		From vessel. In quarantine.
St. Malo	Feb. 2–8	7	1	Believed to have been imported on steamship Ruyth from Sfax, Tunis.
Germany				June 29–Nov. 8, 1924: Cases, 7.
Frankfort-on-Main	Jan. 1–10	1		
Gibraltar	Dec. 8–14	1		
Do	May 4–10	2		
Gold Coast				July–December, 1924: Cases, 106; deaths, 1.
Great Britain:				
England and Wales	Nov. 23–Jan. 3	472		
Do	Jan. 4–May 23	2,848		
London	May 3–16	7		
Newcastle-on-Tyne	Jan. 18–Feb. 21	9		
Do	Mar. 1–May 30	13		
Greece				January–June, 1924: Cases, 170; deaths, 27.
Do				July–December, 1924: Cases, 38; deaths, 26.
Saloniki	Nov. 11–Dec. 22	3		
Do	Feb. 17–Mar. 2	4		
Haiti:				
Cape Haitien	Mar. 22–Apr. 2	6		

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW
FEVER—Continued**

Reports Received from December 27, 1924, to June 26, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
India				Oct 19, 1924, to Jan. 3, 1925: Cases, 12,564; deaths, 2,857.
Bombay	Nov. 2-Jan. 3	30	18	
Do.	Jan. 4-Apr. 4	601	307	Jan. 4-Apr. 25, 1925: Cases, 82,280; deaths, 19,183.
Do.	Apr. 12-25	80	44	
Calcutta	Oct. 26-Jan. 8	307	170	
Do.	Jan. 4-May 2	4,662	3,398	
Karachi	Nov. 16-Jan. 3	16	2	
Do.	Jan. 4-Feb. 14	52	6	
Do.	Feb. 22-May 16	107	29	
Madras	Nov. 16-Jan. 3	122	48	
Do.	Jan. 4-Mar. 7	552	212	
Do.	Mar. 15-May 16	666	279	
Rangoon	Oct. 26-Jan. 3	86	23	
Do.	Jan. 4-Feb. 7	287	49	
Do.	Feb. 15-May 2	1,318	425	
Indo-China				Aug. 1-Sept. 30, 1924; Cases, 223; deaths, 76. Dec. 1-31, 1924: Cases, 485; deaths, 114.
Province—				
Anam	Aug. 1-Sept. 30	49	11	
Do.	Dec. 1-31	167	26	
Cambodia	Aug. 1-Sept. 30	40	9	
Do.	Dec. 1-31	30	13	
Cochin-China				Aug. 1-Sept. 30, 1924; Cases, 115; deaths, 49. Dec. 1-31, 1924; Cases, 50; deaths, 13. Including 100 square kilometers of surrounding country.
Saigon	Nov. 16-Jan. 3	17	5	
Do.	Jan. 4-Feb. 21	32	8	
Do.	Mar. 1-Apr. 18	58	11	Do.
Tonkin	Aug. 1-Sept. 30	19	7	
Do.	Dec. 1-31	238	62	
Iraq	June 29-Jan. 10	138	67	
Bagdad	Nov. 9-Dec. 27	2	1	
Do.	Mar. 1-28	2		
Italy				June 29-Dec. 27, 1924; Cases, 63. Nov. 30, 1924-Jan. 3, 1925: Cases, 50. Reported as alastrim.
Jamaica				Jan. 4-Apr. 25, 1925: Cases, 275. Reported as alastrim.
Kingston	Nov. 30-Dec. 27	4		Reported as alastrim. Aug. 1-Nov. 15, 1924: Cases, 4.
Japan				
Nagasaki	Feb. 9-May 24	53	14	
Taiwan (Formosa)	Jan. 1-31	1	1	
Taihoku	Apr. 4-10	1		
Java:				
East Java—				
Paseroean	Oct. 26-Nov. 1	9	1	
Do.	Nov. 12-19			
Soerabaya	Oct. 19-Dec. 31	685	212	Epidemic in 2 native villages.
Do.	Jan. 15-Apr. 15	655	102	
West Java—				
Batam	Oct. 14-20	2		
Batavia	Oct. 21-Nov. 14	2		
Do.	Dec. 30-Jan. 2	19	4	
Do.	Apr. 25-May 1	1		
Buitenzorg	Dec. 25-31	1		Batavia Residency.
Cheribon	Oct. 14-Nov. 24	15		
Do.	Jan. 1-28	3		
Krawang	Jan. 15-21	1		
Pekalongan	Oct. 14-Nov. 24	22		
Do.	Dec. 25-31	3		Province.
Premalang	Jan. 8-14	1		Pekalongan Residency.
Preanger	Nov. 18-24	1		
Latvia				Oct. 1-Nov. 30, 1924: Cases, 6. Jan. 1-Mar. 31, 1925: Cases, 9.
Lithuania				Jan. 1-31, 1925: Cases, 2.
Malta				Apr. 1-30, 1925: Cases, 6.
Mexico:				
Chiapas (State)	Mar. 1			Reported severely prevalent.
Durango	Dec. 1-31		5	
Do.	Jan. 1-May 31		40	
Guadalajara	Dec. 23-29		1	
Do.	Jan. 6-June 1		21	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico—Continued.				
Mexico City.....	Nov. 23-Dec. 27...	5		Including municipalities in Federal district.
Do.....	Jan. 11-May 23.....	76		
Monterey.....				Jan. 24, 1925: Outbreak, Mar. 14, 1925, present. Reported severely prevalent.
Oaxaca (State).....	Mar. 1.....			
Salina Cruz.....	Dec. 1-31.....	1	1	
Do.....	Feb. 22-Mar. 31.....	7	1	
Saltillo.....	Feb. 22-Apr. 11.....		2	
San Luis Potosi.....	Mar. 29-May 23.....		5	
Tampico.....	Dec. 11-31.....	5	4	
Do.....	Jan. 1-May 31.....	68	20	
Torreon.....	Apr. 1-30.....	1	1	
Tuxpan district.....	Apr. 17-May 7.....	20	3	
Vera Cruz.....	Dec. 1-Jan. 3.....		10	
Do.....	Jan. 5-Apr. 19.....		39	
Villa Hermosa.....	Dec. 28-Jan. 10.....			Present. Locality, capital, State of Tabasco.
Yucatan (State).....	Apr. 5-11.....			In country towns.
Nigeria.....				January-June, 1924: Cases, 357; deaths, 87.
Do.....				July-November, 1924: Cases, 87; deaths, 25.
Paraguay:				
Asuncion.....	Jan. 4-10.....		1	
Persia:				
Teheran.....	Sept. 23-Dec. 31.....		12	
Do.....	Jan. 1-Mar. 19.....		19	
Peru:				
Arequipa.....	Nov. 24-30.....		1	
Do.....	Jan. 1-Feb. 28.....		4	
Philippine Islands:				
Manila.....	Mar. 29-Apr. 4.....	3		
Poland.....				Sept. 21-Dec. 28, 1924: Cases, 30; deaths, 2. Jan. 4-Feb. 28, 1925: Cases, 17; deaths, 1.
Portugal:				
Lisbon.....	Dec. 7-Jan. 3.....	17		
Do.....	Jan. 4-May 10.....	140		Jan. 4-May 10, 1925: Deaths, 37.
Oporto.....	Nov. 30-Dec. 27.....	3	2	
Do.....	Jan. 11-May 30.....	6	1	
Russia.....				January-June, 1924: Cases, 18,229; July-November, 1924: Cases, 3,810 (corrected figure).
Senegal:				
Dakar.....	Mar. 16-22.....	4		
Siam:				
Bangkok.....	Dec. 28-Jan. 3.....	1	1	
Do.....	Jan. 18-Feb. 21.....		19	
Do.....	Mar. 1-Apr. 25.....	30	9	
Sierra Leone:				
Freetown.....	Feb. 7-Mar. 15.....	3		
Kaiyima.....	Mar. 9-15.....	1		
Spain:				
Barcelona.....	Nov. 27-Dec. 31.....		5	
Do.....	Mar. 19-25.....		1	
Cadiz.....	Nov. 1-Dec. 31.....		51	
Do.....	Jan. 1-Feb. 28.....		10	
Madrid.....	Year 1924.....		40	
Do.....	January-February.....		13	
Do.....	Apr. 1-30.....		3	
Malaga.....	Nov. 23-Jan. 3.....		97	
Do.....	Jan. 4-May 23.....		113	
Valencia.....	Nov. 30-Dec. 6.....	2		
Do.....	Feb. 15-May 2.....	6		
Straits Settlements:				
Singapore.....	Feb. 22-Apr. 18.....	5	1	
Switzerland:				
Berne.....	Mar. 15-May 9.....	6		
Lucerne.....	Nov. 1-Dec. 31.....	19		
Do.....	Jan. 1-31.....	24		
Do.....	Apr. 1-30.....	23		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Syria:				
Aleppo.....	Nov. 23-Dec. 27.....	13		
Do.....	Jan. 4-Feb. 28.....	71	18	
Beirut.....	Feb. 11-Apr. 10.....	2		
Damascus.....	Jan. 6-Feb. 20.....	24		
Tripoli.....	July 14-Jan. 2.....	53		
Tunis:				
Tunis.....	Nov. 25-Dec. 29.....	42	35	
Do.....	Jan. 1-Apr. 22.....		315	
Do.....	Apr. 30-May 6.....		13	
Turkey:				
Constantinople.....	Dec. 13-19.....	5		
Do.....	Mar. 16-May 15.....	10	1	
Union of South Africa.....				
				Nov. 1-Dec. 31, 1924: Cases, 14.
				Jan. 1-31, 1925: Cases, 4—natives, Mar. 1-31, 1925: Cases, 9; white, 3; native, 6.
Cape Province.....				
De Aar district.....	Feb. 1-21.....			Outbreaks.
Natal.....	Nov. 9-Jan. 31.....			Do.
Orange Free State.....	Mar. 1-7.....			Do.
Ladybrand district.....	Nov. 2-Apr. 18.....			Do.
Transvaal.....	Jan. 15 & 31.....			Outbreak on farm.
Do.....	Nov. 9-Jan. 10.....			Do.
Do.....	Feb. 1-21.....			Outbreaks.
Uruguay.....				
				January-June, 1924: Cases, 101; deaths, 2.
				July-November, 1924: Cases, 53; deaths, 5.
Yugoslavia.....				
Do.....	Year 1924.....	330	64	
Belgrade.....	Jan. 1-Feb. 28.....	6	1	
On vessel:	Mar. 1-Apr 7.....	6		
S. S. Eldridge.....	Mar. 23.....	1		At Port Townsend, from Yokohama and ports.
S. S. Habana.....	Feb. 18.....	1		At Santiago de Cuba, from Kingston, Jamaica.
S. S. Ruyth.....				At St. Malo, France, January, 1924, from Sfax, Tunis; believed to have imported smallpox infection.

TYPHUS FEVER

Algeria.....				
Algiers.....	Nov. 1-Dec. 31.....	5	1	July 1-Dec. 20, 1924: Cases, 101; deaths, 14.
Do.....	Jan. 1-Apr. 20.....	14	7	In villages, department of Algiers: Cases, natives, 24; Europeans, 3.
Argentina:				
Rosario.....	Jan. 1-31.....		1	
Bolivia:				
La Paz.....	Nov. 1-Dec. 31.....	3		
Do.....	Jan. 1-31.....	2		
Do.....	Mar. 1-31.....	1		
Brazil:				
Porto Alegre.....	Apr. 26-May 2.....		2	
Bulgaria.....				
Do.....				January-June, 1924: Cases, 191; deaths, 28.
Sofia.....	Apr. 30-May 6.....	1		July-October, 1924: Cases, 5.
Chile:				
Concepcion.....	Nov. 25-Dec. 1.....		1	
Do.....	Jan. 6-May 4.....		5	
Iquique.....	Nov. 25-Dec. 1.....		2	
Do.....	Feb. 1-Mar. 28.....		2	
Talcahuano.....	Nov. 16-Dec. 20.....		5	
Do.....	Jan. 4-May 16.....		2	
Valparaiso.....	Nov. 25-Dec. 7.....		4	
Do.....	Jan. 11-May 9.....		21	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
China:				
Antung.....	Mar. 16-22.....	1		
Manchuria—				
Harbin.....	Apr. 8-14.....	1		
Chosen:				
Chemulpo.....	Feb. 1-28.....	1		
Seoul.....	Nov. 1-30.....	1	1	
Do.....	Feb. 1-Mar. 31.....	6	2	
Czechoslovakia				
Do.....	Jan.-Mar.....	68	2	December, 1924: Cases, 5.
Egypt:				
Alexandria.....	Dec. 3-9.....	1	1	
Do.....	Mar. 12-Apr. 29.....	4	2	
Cairo.....	Oct. 1-Dec. 23.....	13	8	
Do.....	Jan. 22-Mar. 18.....	8	5	
Estonia.....				Dec. 1-31, 1924: Cases, 5. Jan. 1-31, 1925: Cases, 4. Mar. 1-31, 1925: Cases, 2.
France.....				July-October, 1924: Cases, 7.
Gold Coast.....				Oct. 1-31, 1924: 1 case.
Greece.....				May-June, 1924: Cases, 116; July-December, 1924: Cases, 40; deaths, 4.
Do.....				
Athens.....	Feb. 1-Apr. 10.....	3	10	
Saloniki.....	Nov. 17-Dec. 15.....	3	2	
Do.....	Jan. 25-Apr. 20.....	3		
Japan.....				Aug. 1-Nov. 15, 1924: Cases, 2.
Latvia.....				October-December, 1924: Cases, 30. Feb. 1-Mar. 31, 1925: Cases, 15.
Lithuania.....				August-October, 1924: Cases, 15; deaths, 1.
Do.....				Jan. 1-31, 1925: Cases, 27; deaths, 2.
Mexico:				
Durango.....	Dec. 1-31.....		1	
Do.....	Mar. 15-Apr. 30.....	1	2	
Guadalajara.....	Dec. 23-29.....		1	
Mexico City.....	Nov. 9-Jan. 3.....	80		
Do.....	Jan. 11-May 23.....	121		Including municipalities in Federal District.
San Luis Potosi.....	Mar. 8-May 2.....		2	
Tampico.....	May 29.....	1		
Morocco.....				November, 1924: Cases, 5.
Palestine.....				Nov. 12-Dec. 29, 1924: Cases, 10.
Bir-tuvia.....	May 12-18.....	2		
Ekron.....	Dec. 23-29.....	1		
Jaffa District.....	Apr. 28-May 11.....	2		
Jerusalem.....	.....do.....	2		
Do.....	Jan. 20-May 11.....	5		
Mikveh Israel.....	.....do.....	1		
Petach-Tikvah.....	Mar. 24-30.....	1		
Ramlah.....	Feb. 10-Mar. 23.....	2		
Tiberias.....	Feb. 24-May 11.....	4		
Peru:				
Arequipa.....	Nov. 24-Dec. 31.....		3	
Do.....	Mar. 1-31.....		1	
Poland.....				Sept. 28, 1924-Jan. 3, 1925: Cases, 751; deaths, 57. Jun. 4-Feb. 11, 1925: Cases, 827; deaths, 68. Feb. 22-28, 1925: Cases, 147; deaths, 15.
Portugal:				
Lisbon.....	Dec. 29-Jan. 4.....		2	
Do.....	Apr. 6-12.....		1	
Oporto.....	Jan. 4-Feb. 7.....	2		
Rumania.....				January-June, 1924 Cases, 2,906; deaths, 328.
Do.....				July-December, 1924: Cases, 288; deaths, 38.
Constanza.....	Dec. 1-20.....	1		
Do.....	Feb. 1-28.....	2		
Russia.....				Jan. 1-June 30, 1924: Cases, 95,682. July-November, 1924: Cases, 14,219 (corrected figure).
Leningrad.....	June 29-Nov. 22.....	12		
Spain:				
Madrid.....	Year 1924.....		3	
Melaga.....	Dec. 21-27.....		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from December 27, 1924, to June 26, 1925—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Sweden:				
Goteborg.....	Jan. 18-Feb. 28.....	2		
Tunis.....				July 1-Dec. 20, 1924: Cases, 40.
Tunis.....	Mar. 5-25.....	9	1	
Do.....	Apr. 2-May 6.....	25	5	
Turkey:				
Constantinople.....	Nov. 15-Dec. 19.....	6	1	
Do.....	Jan. 2-May 15.....	14	1	
Union of South Africa.....				Nov. 1-Dec. 31, 1924: Cases, 345; deaths, 87. Jan. 1-Mar. 31, 1925: Cases, 200; deaths, 24; native. In white population, cases, 12.
Cape Province.....	Nov. 1-Dec. 31.....	126	24	
Do.....	Jan. 1-Mar. 31.....	91	12	
East London.....	Nov. 16-22.....	1		
Do.....	Jan. 18-Apr. 4.....	3	2	
Port Elizabeth.....	Feb. 22-Mar. 7.....	1	1	
Natal.....	Nov. 1-Dec. 31.....	130	50	
Do.....	Jan. 1-Mar. 31.....	49	7	
Durban.....	Feb. 15-Mar. 28.....	4		
Orange Free State.....	Nov. 1-Dec. 31.....	59	8	
Do.....	Jan. 1-Mar. 31.....	41	5	
Transvaal.....	Nov. 1-Dec. 31.....	30	5	
Do.....	Jan. 1-Mar. 31.....	14		
Yugoslavia.....				Year 1924: Cases, 319; deaths, 22, Jan. 1-Feb. 28, 1925: Cases, 87; deaths, 8.
Belgrade.....	Nov. 24-Dec. 28.....	5		
Do.....	Apr. 8-30.....	4		

YELLOW FEVER

Gold Coast.....	October-November, 1924.	4	4	
Nigeria:				
Lagos.....	June 6.....			Present.
Salvador:				
San Salvador.....	June-October, 1924.	77	28	Last case, Oct. 22, 1924.